

ARCHIVES

OF

THE MIDDLESEX HOSPITAL

CLINICAL SERIES No. XI.

(BEING THE TWENTY-EIGHTH VOLUME OF THE ARCHIVES)

EDITED BY

W. SAMPSON HANDLEY AND VICTOR BONNEY

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The Middlesex Hospital

VOLUME XXVIII



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Archives of The Middlesex Hospital.

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PREFACE.

THESE Clinical Reports are intended to embody the teaching of the Hospital in respect of the latest developments in Medicine and Surgery, by which means it is hoped to make them a real help to old students of the School in dealing with the complex problems of every-day practice.

By an arrangement with the Committee of The Middlesex Hospital Club every member resident in the British Isles will receive three times a year a copy of the Clinical Archives as one of the privileges of his membership.

For others desirous of possessing them, it has been decided to accept a nominal subscription of half a guinea per annum for the volumes issued during the year, inclusive of that dealing with the special work of the Cancer Investigation Department.

ARCHIVES

OF

THE MIDDLESEX HOSPITAL.

THREE UNUSUAL CASES OF MAMMARY GROWTHS.

1. SPHEROIDAL CARCINOMA AND ENDOTHELIOMA
IN THE SAME BREAST.
2. SOFT ADENOMA MAMMÆ.
3. MULTIPLE FIBRO-ADENOMATA OF THE MAMMA.

By

SIR ALFRED PEARCE GOULD, K.C.V.O., M.S., F.R.C.S.,
SENIOR SURGEON TO THE HOSPITAL.

DURING last Summer Term there were three cases of Diseases of the Breast under my care in "Queen" Ward, which were so unusual in some of their features that they seem to justify a brief record in our Archives. They are linked together only by the affection being in the breast in each instance, and by their illustrating what is known to be rare, and they are not brought together as having any connection pathologically or clinically. I will add to the record of each case a few comments to indicate wherein lies its interest.

1. *A case of two malignant Tumours of different structure—Carcinoma and Endothelioma—occurring simultaneously in the same breast.*

M. A. C., a single woman, 68 years of age, was admitted into "Queen" Ward on 21 June 1912. There was a history of tuberculosis in her mother and in two of her sisters. The patient had suffered from rheumatic fever when 20 years of age, and she had been the subject of "winter cough" for several years.

She told us that two years ago she noticed a small lump in the outer part of the left breast; this had slowly increased in size, and at times had given her a little pain. A fortnight before admission she noticed that the left nipple was drawn in, and detected another lump beneath the areola, and this led her to seek advice.

She was a well-nourished woman, with rather full, well-developed mammæ. Her heart and blood-vessels appeared to be free from disease, but her lungs shewed evidences of emphysema. The urine was free from albumen and contained 1·6 per cent. of urea.

The right breast appeared quite normal.

In the left breast two distinct lumps could be easily identified. One of these was in the outer part of the gland, about the size of a pigeon's egg; it was inseparably attached to the gland, adherent also to the skin over it, and slightly adherent to the deep fascia beneath it; it was firm in consistence, solid, irregular in outline, and was not tender.

A second and slightly larger lump occupied the centre of the breast beneath the areola. This lump also was incorporated with the gland and adherent to the skin of the areola; the nipple was markedly retracted and firmly fixed to the growth. This lump was firm and a little irregular in outline.

In the left axilla I felt one small, firm, but movable gland, which was firmer and larger than the glands felt on the right side. I could not detect any enlargement of glands above the clavicle, nor signs of enlargement of the liver, nor of growth in the pelvis.

I operated on 25 June 1912, making the usual very free removal of parts, including the skin over and wide of the growths, the subcutaneous tissue from an inch to the right of the sternum to well beyond the edge of the latissimus dorsi muscle, and from 2 inches below the xiphoid cartilage nearly to the clavicle, the mamma, the sternal portion of the pectoralis major, the fascia over the serratus magnus, and all the fat and glands in the axilla. She made a good recovery, and left for home ten days after the operation.

The breast was hardened in kaiserlin and then cut in two, the line of section crossing the centre of the two growths; one half is preserved in our Museum, and the other half in the

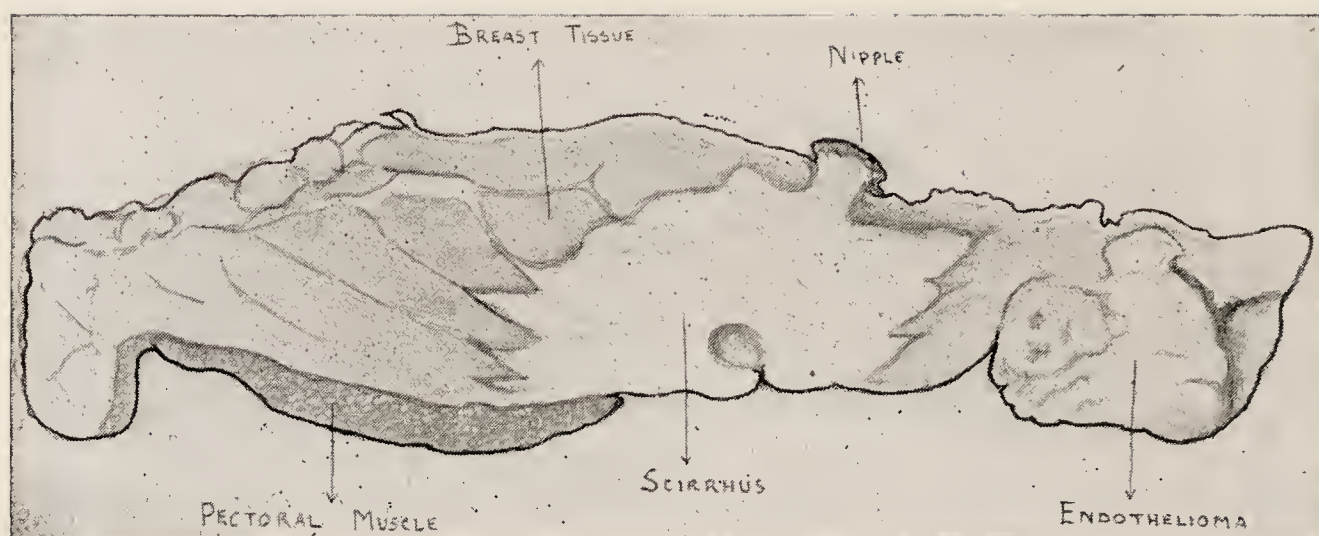


FIG. 1.



FIG. 2.—Micro-photograph of Scirrhus.



FIG. 3.—Micro-photograph of Endothelioma.

Hunterian Museum. The growth in the outer part of the breast is pronounced by our Pathologists and by Mr. Shattock to be an Endothelioma, while the growth in the centre of the breast is a typical scirrhus spheroidal-cell Carcinoma. The difference between these two growths was as apparent to the naked eye as under the microscope; the one was very firm and fibrous, the other softer and almost spongy in texture; the one was white with fine yellow streaks and spots, the other was reddish-grey in section. Difference is clearly shewn in the sketch of the cut surface of the breast (FIG. 1). The accompanying micro-photographs shew clearly the different structure of the two growths (FIGS. 2 and 3). The axillary glands did not shew any sign of secondary growth when examined microscopically.

Cases of multiple primary malignant disease are only occasionally met with, and those that I have previously seen have been examples of multiple primary growths of the same structure. Thus I have several times seen two epitheliomatous growths on the lip; twice have I operated upon patients with two annular growths of columnar carcinoma of the colon. At the present moment there is in "Helena" Ward a man from whom I have removed the tongue for epithelioma, who was operated upon four years ago for epithelioma of the cheek on the same side. The late Sir Henry Butlin pointed out that if epithelioma of the tongue is examined in its very early stage, it may be found to start from two or more independent centres which then speedily coalesce. Multiple rodent ulcers are of course quite common. In the breast such an occurrence as multiple primary cancer is certainly very rare. I have seen and recorded one previous case, and one half of that breast is in our Museum and the other half in the Hunterian Museum. That proved to be a very malignant case, and the patient died from secondary growths a few months after the operation.

A peculiar interest attaches to the case I am now recording, from the fact that the two growths differ very widely in structure. It is impossible to regard the centrally placed scirrhus as secondary to the endothelioma, although it was noticed nearly two years later. It is worth noticing that the older and slower growth is much the more richly cellular of the two. I hope to keep in touch with this patient; should she have a

recurrence of the disease it will be interesting to note whether the secondary growth is an endothelioma or a spheroidal carcinoma. I should suspect it would be the latter, for it is the more infective form of growth. The low infectivity of endothelioma of the mamma was illustrated in the case of a patient in "Queen" Ward earlier this year. In 1901 she came under my care with a tumour of the left breast, which I at first took to be a sarcoma; it was of some size, and yet I could not detect any enlarged axillary gland; examination of the growth after removal shewed it to be an endothelioma. Dr. Foulerton published an account of the specimen. (Path. Soc. Trans., 1901, vol. lii, p. 75.)

The patient remained well for eleven years, and then early in 1912 she was again admitted to "Queen" Ward with a lump over the posterior fold of the axilla. This was removed and sent in the usual course to the Pathological Laboratory for examination, and without any note as to its source. When Dr. Hillier examined a section of the growth he at once recognized it as being identical with the specimen he had seen eleven years before, and on shewing it to Dr. Foulerton he, too, instantly identified it as exactly like the specimen he had previously described. It was only after enquiry from my house-surgeon that they learnt that the two specimens had been furnished by the same patient. Surely no stronger proof of the exact reproduction of a malignant growth in its secondary deposits was ever furnished, nor could we desire any more striking evidence of the precision of the pathological work done for us in our Pathological Laboratory by Dr. Foulerton and Dr. Hillier.

To come back to the case I am here recording, however, the occurrence of two different types of malignant growth in the same breast is of great interest from its bearing on the nature of cancer. This is clearly not a case in which one form of malignant growth has developed into another, as has been shewn to occur sometimes in mice. It certainly does not support the parasitic view, and something other than Sir Henry Butlin's *Unicellula Cancræ* must have been at work to cause this. At present we cannot go further than the statement that it possibly illustrates the response of two varieties of cells to one developmental (cytological) influence.

A case of carcinoma and sarcoma of the same breast is recorded in the "Lancet" for 14 September 1912, by Dr. E. H. Kettle. He had been able to find only three other similar cases recorded, so this case now related makes the fifth to be found in medical literature.

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Coenen. "Beiträge zur Klinischen Chirurgie," Band 68.

Schlagenhauser. "Centralblatt für Allgemeine Pathologie and Pathologische Anatomie," 31 August 1906.

Kettle. "Lancet," 14 September 1912.

2. *Soft Adenoma Mammæ.*

H. L., a single woman, 27 years of age, was admitted to "Queen" Ward on 8 July 1912. She stated that 2½ years ago she noticed a lump the size of a pea in the inner and upper quadrant of her left breast. This had steadily grown, and she consulted Dr. Forsbrook about it, being troubled solely by its size, not at all by pain. Dr. Forsbrook referred her to me. She was in other respects a healthy young woman. The right breast was small, with very little fat about it, the nipple well formed. The left breast was considerably larger than the right, and the nipple was both more prominent and displaced considerably outwards. Blue veins were seen coursing under the skin.

On examining the breast with the hand a lump of the shape, size, and consistence of a halfpenny bun was found to constitute nearly all of the projecting "breast," and the gland proper was identified as a much smaller part to the inner side of the nipple. These two parts, the lump and the displaced gland, were movable one upon the other. The lump was very slightly uneven on its surface, and it had a well-marked slightly rounded edge. It was not adherent either to the skin or to the fascia beneath it. There were no enlarged glands in either the axilla or the neck.

The size and continuous growth of this lump suggested to some of those who saw this case that the growth was a sarcoma,

but it was not difficult to determine that the tumour was well encapsuled, and had no tendency to infiltrate either mammary gland, skin, or fascia. The very marked displacement of the gland towards the axilla was a very striking feature of the case. At the same time, the soft consistence of the growth, its bun-like form, flat on its deep surface, slightly convex on the other surface, with an even rounded edge and finely uneven surface, its rapid growth and its size, clearly differentiated it from the usual variety of "Chronic Mammary Tumour"—the firm fibro-adenoma. It seemed quite clear that it was an example of a much rarer tumour, the soft adenoma, or what has been also known as the pure adenoma, because of the very small admixture of fibrous tissue with the adenomatous tissue, as contrasted with the wide areas of dense fibrous tissues in which are found widely scattered small islets of gland structure.

On 13 July I exposed the tumour by a curved incision along its inner border, and easily enucleated it within its capsule without injury to the mammary gland. The tissues around it were very vascular.

The patient left the hospital on 16 July, and returned on 20 July to have the sutures removed. The wound was well healed, and the displaced gland had returned to its normal situation. It was now hardly to be distinguished in any way from its fellow.

The naked-eye appearance of the tumour and its freshly-cut surface resembled very closely a rather red sweet-bread. Microscopically it was found to be wholly composed of mammary adenomatous tissue, with a very small amount of supporting fibrous tissue. This is well shewn in FIG. 5.

Soft mammary fibromata are among the rarer forms of breast tumours. I have had to treat only two others quite like this case. The larger of these two tumours was a more globular tumour, about the size of a small tomato; it occurred in a young unmarried woman, and had exactly the same general characters as the tumour in the case here recorded, for it was definitely encapsuled, moved freely upon the mammary gland and under the skin, was soft in consistence, finely uneven on the surface, and was growing rather rapidly. I removed the tumour, and it did not recur. Such tumours are liable to be mistaken for sarcoma,



FIG. 4.—Soft Fibro-Adenoma.

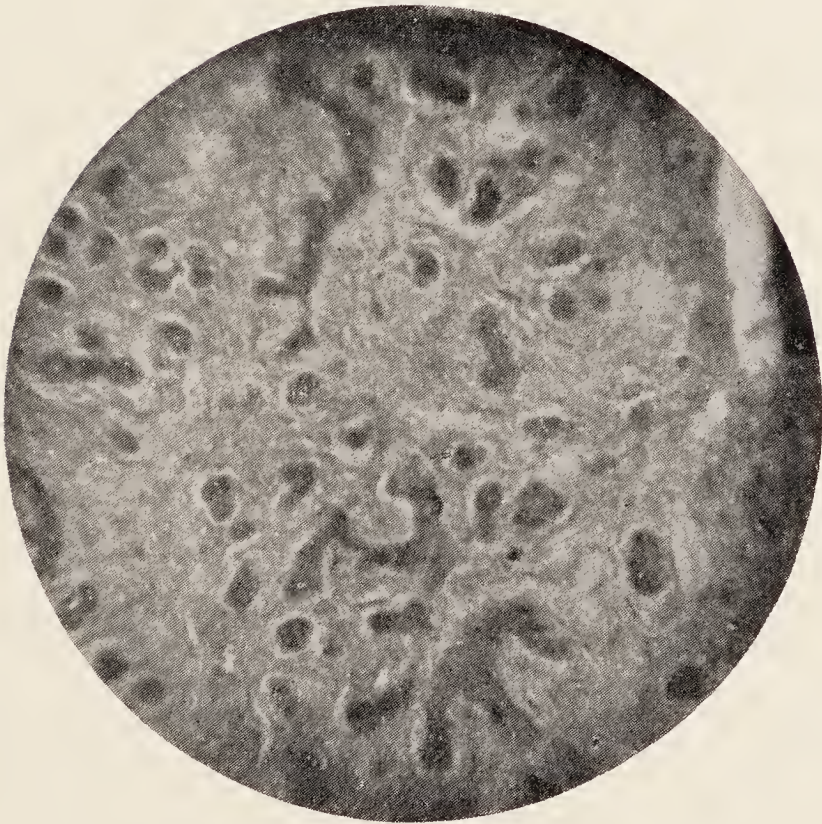


FIG. 5.—Micro-photograph of Soft Fibro-Adenoma.

and the mistake uncorrected leads to the needless sacrifice of the mamma.

3. *Multiple Fibro-Adenomata of Mamma.*

On the same day as the second case—8 July 1912—there was also admitted to “Queen” Ward a girl, K. C., æt. 15, with a swelling of the right breast, which formed a striking contrast to the former case, and was also itself of some special interest. She told us that she had noticed a lump in her right breast for a year; it was then as large as a hazel nut, and it had slowly increased in size. She had had no pain in the breast until a fortnight before admission, when it began to ache, and this pain extended also to the right arm.

The patient was a healthy, well-nourished girl. The mammæ were moderately developed, with well formed nipples; the left was quite normal. In the outer part of the right breast was a lump which bulged beneath the skin. There were no enlarged veins beneath the skin. On feeling this lump it was found to be firm, with a well defined irregular outline, freely movable upon the breast tissue, the skin, and the deep fascia. On examining this lump more closely it was found to consist of three separate masses movable upon each other, but lying in such close apposition as to appear to form one tumour. The largest of these tumours was about the size of a pigeon’s egg, and lay above and to the outer side of the nipple; another about half this size lay vertically above the nipple, and the third of them, intermediate in size, lay to the outer side of the nipple and a little below it (FIG. 6). The nipple was not displaced by these tumours, nor was the mammary gland pushed nearer to the sternum. There were no enlarged glands in the axilla or neck.

The diagnosis of this case presented no difficulty. Contrasted with the tumour in the second of these cases, these tumours were more globular or ovoid in outline, more uneven on the surface, much firmer in consistence, and although together forming a mass of some size, they did not displace the mamma to any recognisable degree.

I operated on 13 July, and through a curved incision along the axillary border of the breast I exposed the capsule of

the largest tumour, enucleated it, and then enucleated the other two tumours almost without any further use of the knife. The patient left the hospital on 17 July with a collodion dressing on, and Dr. Forsbrook subsequently took this dressing off and removed the sutures.

The tumours were typical firm fibro-adenomata, whitish in colour, nodular in outline, on section almost exactly resembling pure fibrous tissue. The structure as shewn by the microscope is depicted in FIG. 7—a large amount of fibrous tissue with small scattered areas of adenomatous tissue. The contrast in structure between it and soft adenoma is particularly well shewn in the reproduction of the micro-photographs kindly taken of sections of these tumours, and reproduced in Figs. 6 and 7.

The occurrence of more than one fibro-adenomatous tumour in the same patient, either in the same breast or in both, is not a rare event. I have seen many examples of it. But I have not before met with a case in which three of such tumours were so closely placed as to appear to form one single growth. Not long ago in removing a fibro-adenoma I found a second quite small growth of the same kind lying close beneath the tumour I had recognised. It was so small, and so completely covered over by the larger tumour that its presence was not even suspected before operation. Such an experience has taught me to make a careful search for any small nodule of growth whenever I operate upon a “chronic mammary tumour.” The occasionally observed “recurrence” of these tumours after operation is not a true secondary growth or recurrence, but is the development of a second and quite independent tumour. That the three tumours in this case developed simultaneously was not a necessary circumstance; they might have grown at intervals of time and been mistaken for recurrent growths.



FIG. 6.—Multiple Fibro-Adenomata.



FIG. 7.—Micro-photograph of Fibro-Adenoma.

A REVIEW OF ONE HUNDRED SUCCESSIVE CASES OF CHOREA TREATED BY CHLORETONE.

By W. ESSEX WYNTER, M.D., F.R.C.P.

PHYSICIAN TO THE HOSPITAL.

CHLORETONE (Trichlor-Tertiary Butyl-Alcohol), now pretty well known for its sedative and local anæsthetic properties, occurs as a white crystalline powder with camphoraceous odour and taste. It melts and evaporates at the body temperature, and is only slightly soluble in water (1 in 200), but dissolves (1 in 10) in glycerine, (3 in 2) alcohol, (1 in 50) liquid paraffin, or (1 in 12) olive oil.

The usual dose is 5 to 25 grains, and in the cases cited the drug was administered in an emulsion of paraffin or codliver oil, in one case 10 grains being given in an enema, solution being effected by the addition of spirit or glycerine. A review of 90 consecutive cases of chorea in which the use of chloretone was recorded shews that the duration of movements under its influence averaged 9 days; in 56 they ceased within 10 days, in 31 within 20, and in 3 they extended beyond this—22, 26, and 32 days.

There are no means of comparing these with cases otherwise treated, as the exact duration of movements is not recorded with any constancy. But their rapid subsidence under chloretone in cases which had been unrelieved for weeks, months, and even years, is very striking, and the comparative quietude attained as soon as the patient is under its influence is a great comfort to those in charge, and renders the case more manageable. The effect of discipline, diet, and seclusion on cases admitted to hospital must be taken into account as important factors, apart from drug treatment. Chorea, however, in a few instances developed while the patient was in hospital for other disease, especially rheumatism, and in such cases subsided

rapidly under chloretone. The drug was more effective the earlier it was given in the course of the disease, especially in allaying active movements. In the paretic form it excited little favourable influence, and was discontinued.

Those who remember the introduction of salicylate of soda in 1876, and more recently the advent of anti-diphtheritic serum, will recall the controversies that arose as to their efficacy as remedies in regard to mortality complications, duration of symptoms, and ultimate recovery; and the methods adopted of treating series of cases by the old and new methods, side by side, or under circumstances as similar as possible in order to estimate the value of the new remedy, which was long in being determined. Ultimately both have been universally accepted with due limitations as to suitability of cases, and with proper allowance for extenuating circumstances.

“Anything,” it is said, “can be proved by statistics, and nothing without them.” Inferences made from figures, particularly with regard to the duration of illness, are marred in the case of chorea, as well as in rheumatism or diphtheria, by the development of complications and the pre-existence of other disease, which prolong the need for treatment after the acute disorder has subsided. The one effect of a new remedy which can be estimated under such circumstances is the amelioration or limitation of the active manifestations of the particular complaint. This is indicated in the case of chorea by the mitigation and final cessation of the choreic movements, the former being a matter of daily observation, striking enough to the observer, but difficult to describe in words, and the latter being indicated by the duration of the chloretone treatment, which, in the series of cases under consideration, was discontinued as soon as such movements ceased, the number of days during which chloretone was administered being a measure of the continuance of choreic movements. Short notes have been inserted to shew the duration of the disorder before treatment, records of previous attacks and complications, especially those affecting the heart. The period of stay in the hospital was dependent on so many variable factors apart from the actual chorea that it was of little use for comparison. It may be stated, however, that in one service, which did not include the children’s ward, and so may be expected to have

dealt with a larger proportion of older subjects, the five years 1901-1905 inclusive shewed an average stay of 63·4 days, while the seven subsequent years, 1906-1912 inclusive, shewed a reduction of the average stay to 40·8 days, rather less than two-thirds, chloretone being employed only in a minority. Another service over the same period of twelve years shewed no variation, the average stay being 40 and 40·5 days respectively; but as the first period included the children's ward containing the less severe cases, and the second did not, the maintenance of the average may be regarded as an improvement. Chloretone was only occasionally used. A third service, representing general wards for the first five years 1901-1905, and these, with the addition of the children's ward during the seven years 1906-1912, during which chloretone was nearly uniformly used, gave an average of 30 days' stay for each period. It may be that there is a personal factor affecting the retention of cases in hospital, especially such as are complicated by serious organic or functional disease, so often the case in chorea, and perhaps an average stay of a month, taking the long and short cases together, is about the lowest that can be attained with due regard to satisfactory recovery and freedom from relapse. One would, however, have looked for some indication of reduced average stay in the cases systematically treated by chloretone, but this does not appear, and it may be that, as suggested in the beginning of this article, early subsidence of active symptoms is more obvious than shortening of the period of illness, as is the case in rheumatism and diphtheria.

Repeated attacks of chorea are common. Many of those admitted were in their second or third, and in a few instances the same patient has been admitted more than once. These cases are indicated by an asterisk. Two or three individuals admitted again and again shewed a markedly neurotic temperament, on which the chorea was superposed. Actual relapses did not occur. There was in one or two cases a renewal of movements which had subsided under treatment. These are indicated by a break in the administration of chloretone.

Two cases exhibited exfoliation of the skin, especially on the hands and heels, simulating scarlet fever without fever or rash. Some shewed marked somnolence as the drug took effect—only

rousing to take food. This, however, passed off directly it was discontinued.

In rheumatic cases aspirin or salicylate of soda may be combined with chloretone in the mixture, and would appear in all cases to be a reasonable adjunct. Experience shews that an intensive mode of administration is most effective. Five grains of chloretone every four hours is an average dose, and may be doubled in adolescents, being continued for two days, and continued at longer intervals as the patient becomes quiet, or omitted for a short time if she becomes drowsy.

The actual cases are detailed below :—

1905.

Register No.

1109.* Lily Stocks. F. 12. 30 Dec.—7 Feb. **40 days.**

Chorea 14 days. Movements general. Mitral regurgitation. Tonsillitis. Chloretone thrice daily, 4 grains for 5 days. Child drowsy. Chloretone resumed 23—26 Jan.

Chloretone **8 days.**

1112. Mary Dear. F. 11. 30 Dec.—24 Jan. **26 days.**

Chorea. Mitral regurgitation. No chloretone.

1906.

260.* Florence Pocock. F. 7. 3 Mar.—18 Apr. **46 days.**

Chorea twice before. Chloretone 4 grains till 16th. Mitral disease. Ward emptied on account of measles. **13 days.**

479.* Florence Pocock. F. 7. 5 May—20 June. **46 days.**

No note of chloretone.

630. George Hewett. M. 11. 11 June—11 July. **30 days.**

Scarlet Fever. Measles. Chorea 14 days. Movements general and violent. Side boards to bed. Must be held down to be fed. Chloretone **17 days**, with interval of 4 days.

701. Elizabeth Tooney. F. 6. 30 June—18 July. **18 days.**

Chorea 6 weeks. Movements general. No note of chloretone.

860.* Ida Bruce. F. 10. 13 Aug.—11 Oct. **60 days.**

Chorea off and on 3 years. Movements general. Chloretone, 25 Aug., 5 grains; 5 Sep., $2\frac{1}{2}$ grains; omitted 26 Sep.

32 days.

Register No.

880. Horace Cox. M. 8. 17 Aug.—12 Sep. **26 days.**
Chorea 1 day. Movements general. Unable to speak or feed himself. Chloretone thrice daily, 5 grains. 20th, chloretone diminished to $2\frac{1}{2}$ grains twice; 25th, $2\frac{1}{2}$ grains every night; 27th, omitted. Desquamation of trunk and limbs. Soft apex murmur. **10 days.**
1053. Caroline Newcombe. F. 12. 29 Sep.—10 Oct. **11 days.**
Right hemichorea 3 weeks. No note of treatment.
1091. Amy Newstead. F. 7. 9 Oct.—31 Oct. **22 days.**
Previous attack 6 months before. Present attack 2 weeks. Face and limbs. Chloretone $2\frac{1}{2}$ grains. **6 days.**
- 1135.* Lilian Ward. F. 11. 18 Oct.—24 Nov. **37 days.**
Previous attack 6 weeks, 3 years before. Chorea 1 week. Movements general. Unable to speak properly or feed herself. Chloretone 5 grains thrice for 3 days; $2\frac{1}{2}$ grains for 1 day. Stupor. Mitral regurgitation. Again $2\frac{1}{2}$ grains for 3 days. **7 days.**
1322. Ada Franklin. F. 8. 7 Dec.—5 Jan. **29 days.**
Chorea 3 weeks. Systolic apex murmur. Chloretone, 8 Dec., 5 grains; 10th, $2\frac{1}{2}$ grains; 27th, omitted. **19 days.**

1907.

26. Evan Begley. M. 9. 8 Jan.—24 Jan. **16 days.**
Rheumatic fever. Scarlatina. Chorea 4 days. Mitral regurgitation. Intercurrent tonsillitis. Chloretone thrice daily, 5 grains for 4 days; $2\frac{1}{2}$ grains for 6 days. **10 days.**
49. Annie Halsey. F. 12. 14 Jan.—13 Feb. **30 days.**
Chorea 6 weeks. Movements general. Unable to speak or feed herself. Chloretone **11 days.**
70. Dorothy Mandeville. F. 7. 18 Jan.—14 Feb. **27 days.**
Chorea 4 months. Purgatives effected most. Chloretone **5 days.**
105. Frank Humber. M. 5. 29 Jan.—27 Feb. **30 days.**
Fell on head 13 Jan. Chorea 19 Jan. Chloretone thrice daily, 5 grains for 3 days; $2\frac{1}{2}$ grains for 1 day. **4 days.**
203. Louisa Pearson. F. 9. 21 Feb.—28 Mar. **35 days.**
Oct. 1905, chorea commenced and has not subsided. Arms chiefly involved, and slightly face. Mitral regurgitation. Purgatives effected most. Chloretone **14 days.**

Register No.

517. John Hurst. M. 12. 8 May—6 June. **29 days.**
Chorea 5 days. Speech difficult. Movements general.
Chloretone thrice daily, 5 grains. **20 days.** (Overdone.)
- 534.* Alice Levy. F. $4\frac{1}{2}$. 13 May—12 June. **30 days.**
Recurring chorea since February. Well marked movements.
Chloretone **15 days.**
556. Mabel Handy. F. 13. 18 May—20 June. **33 days.**
Rheumatism since February. Chorea 1 week. Mitral regurgitation.
Chloretone **12 days.**
783. William Bayliss. M. 4. 11 July—7 Aug. **27 days.**
Scarlet fever in February 1907. Bronchitis. Chorea developing several weeks. Mitral regurgitation.
803. Rose Wheal. F. 11. 16 July—7 Aug. **22 days.**
Chorea 15 months ago. Present attack 1 month. Scarlatina 2 years. Mitral disease. Erythema and drowsiness.
Chloretone **11 days.**
892. Nellie O'Brien. F. 12. 9 Aug.—4 Sep. **26 days.**
Chorea 5 weeks. Mitral regurgitation.
Chloretone **10 days.**
945. Barnet Figgof. M. 8. 24 Aug.—25 Sep. **32 days.**
Chorea weeks. Trunk and limbs. Chloretone thrice daily, 5 grains for 6 days; $2\frac{1}{2}$ grains for 4 days. **10 days.**
1127. Amelia Reed. F. 15. 9 Oct.—23 Oct. **14 days.**
Rheumatism 19 days. Chorea 9 days. Movements chiefly in arms.
Chloretone **8 days.**
1244. Isabella Unwin. F. 12. 5 Nov.—18 Dec. **43 days.**
Sister has chorea. Chorea 14 days, severe; skin red from friction. Erythema.
Chloretone **13 days.**
1367. Ellen Smith. F. 5. 6 Dec.—14 Jan. **39 days.**
Chorea 3 weeks. Temporary cardiectasis.
Chloretone **9 days.**
1369. Alice Hopley. F. 12. 7 Dec.—2 Jan. **26 days.**
Rheumatism in August. Chorea 3 weeks. Movements general. Mitral regurgitation.
Chloretone **10 days.**
1422. Florence Pittenate. F. $7\frac{1}{2}$. 21 Dec.—22 Jan. **32 days.**
Rheumatism 2 months ago. Aortic and mitral regurgitation. Chorea 3 weeks, arms and face. Speech affected. Cannot feed herself.
Chloretone **10 days.**

1908.

Register No.

18. Alfred Sandy. M. $6\frac{1}{2}$. 4 Jan.—22 Jan. **18 days.**
Chorea 3 weeks. Chloretone 5 grains thrice for 2 days ; $2\frac{1}{2}$ grains for 3 days. **5 days.**
21. Ella Imbert. F. 12. 4 Jan.—22 Jan. **18 days.**
Chorea 2 years before, with scarlatina. Rheumatism 6 months before. Chorea of 2 weeks' standing. Mitral regurgitation. Twitching of hands and face ceased 8 Jan. Chloretone 5 grains thrice for 2 days ; $2\frac{1}{2}$ grains thrice for 2 days. **4 days.**
110. Maud Howard. F. 10. 23 Jan.—13 Feb. **21 days.**
Chorea since 1906 with remissions. Affecting arms and face. Can speak and feed herself. Chloretone 5 grains thrice for 2 days ; $2\frac{1}{2}$ grains for 2 days. Chloretone **4 days.**
316. Barbara Ross. F. 13. 3 Mar.—25 Mar. **22 days.**
Scarlatina 7 years before. Chorea 2 and 1 years ago. Chorea 4 weeks. Limbs and face twitching. Chloretone 5 grains thrice for 2 days ; $2\frac{1}{2}$ grains for 2 days. Chloretone **4 days.**
367. Annie Daley. F. 7. 23 Mar.—8 Apr. **16 days.**
Chorea affecting face and arms. Chloretone 5 grains thrice for 1 day ; $2\frac{1}{2}$ grains for 2 days. Chloretone **3 days.**
395. Thomas Bacon. M. 12. 28 Mar.—14 Apr. **17 days.**
Chorea 3 years with remissions. Chloretone 5 grains thrice. **5 days.**
515. Fred. Wheatley. M. 13. 27 Apr.—19 May. **22 days.**
Chorea 3 weeks. Movements general. Temporary cardiac-tasis. Chloretone **7 days.**
625. Agnes Palmer. F. 12. May 21—July 1. **41 days.**
Influenza Jan. ; Chorea since, nearly 5 months. Movements general. Sustained knee jerks. Hyperextension of wrists and fingers. Chloretone May 21—June 2. **12 days.**
898. Florence Saunders. F. 8. 4 Aug.—16 Sep. **43 days.**
Chorea 3 weeks. Movements general. Chloretone $2\frac{1}{2}$ grains thrice for 1 day ; 5 grains thrice for 21 days. Chloretone **22 days.**
1021. Florence Sheppard. F. 21. 9 Aug.—20 Sep. **42 days.**
Two previous attacks of Chorea. Mastoid operation 5 weeks previously. Chorea 4 weeks. 6 months pregnant. Chloretone **9 days.**

Register No.

1176. Kate Wood. F. 13. 10 Oct.—10 Nov. **31 days.**
 “Growing pains.” Chorea, 1904. Mitral regurgitation.
 Chorea affecting face and hands. Chloretone 5 grains twice
 for 17 days; once daily for 3 days. Chloretone **20 days.**
- 1233.* Alice Levy. F. 5. Oct. 24—Nov. 24. **31 days.**
 Chorea 1 year ago. Present attack 6 months. Move-
 ments general. Chloretone 5 grains every 4 hours.
 Chloretone **12 days.**
1314. Elizabeth Oakley. F. 23. Nov. 11—Dec. 18. **37 days.**
 Rheumatic fever, 1907. Chorea 6 weeks. Movements
 general. Speech affected. Chloretone 5 grains every 4 hours.
 Chloretone **19 days.**
1347. Ethel Binks. F. 9. 18 Nov.—2 Jan. **45 days.**
 Choreic movements 3 months. General. Paresis of arm
 transitory. Chloretone **10 days.**
1370. Ronald Ayres. M. 13. 24 Nov.—4 Dec. **10 days.**
 Chorea 1 month. Convalescent. No Chloretone.
1506. Minnie Brown. F. 14. Dec. 30—Jan. 22. **23 days.**
 Chorea at 12 and 13. Movements 14 days, face and arms.
 Some bruises. Chloretone 5 grains every 4 hours. **8 days.**

1909.

27. James Reed. M. 13. 5 Jan.—5 Feb. **31 days.**
 Chorea 2 years ago. Present attack 2 months. Movements
 general. Mitral regurgitation. Chloretone **6 days.**
138. Mary Midwinter. F. 18. 27 Jan.—10 Feb. **14 days.**
 Two previous attacks of Chorea, 1905 and 1907. Present
 attack began a month before admission, with movements of
 the face and hands. Chloretone **4 days.**
257. Queenie McArthur. F. 7. 19 Feb.—16 Mar. **25 days.**
 Already treated 2 months for Chorea. There are convulsive
 movements of legs and arms, with paresis of left arm. Mitral
 regurgitation. Punctate erythema on arms and face.
 Chloretone **13 days.**
301. Maud Smith. F. 9. 27 Feb.—16 Mar. **17 days.**
 Chorea 2 years. Movements of shoulders and eyelids.
 Movements ceased in 2 days. Chloretone **5 days.**

Register No.

362. John Allen. M. 11. 12 Mar.—17 Apr. **35 days.**
Five previous attacks of Chorea in 3 years. Movements affect head, trunk, and limbs. Padded cot required. All movements ceased. Chloretone **6 days.**
549. Minnie Stockwell. F. 7. 23 Apr.—7 May. **14 days.**
Rheumatism 2 years ago. Choreic movements of hands, face, and legs. Systolic mitral murmur. Chloretone **7 days.**
667. Elsie Souhany. F. 8. 20 May—23 June. **34 days.**
Chorea commenced at end of Dec. 1908, and has continued. Chloretone **9 days.**
859. Joseph Stephens. M. 12. 28 June—24 July. **26 days.**
Chorea 1 week. Movements general and constant. Sleeps badly. Mitral regurgitation. Chloretone **5 days.**
873. Edith Camac. F. 11. 2 July—6 Aug. **35 days.**
Chorea 6 weeks. Movements general. Chloretone 5 grains for 6 days; $2\frac{1}{2}$ grains for 6 days. **12 days.**
900. Rose Rolfe. F. 13. 8 July—6 Aug. **30 days.**
Rheumatism, influenza, measles, and mumps. Chorea 6 weeks, limited to right side. Mitral regurgitation. Chloretone **10 days.**
- 998.* Joseph Stephens. M. 13. 4 Aug.—9 Sep. **36 days.**
Choreic movements general. Chloretone **20 days.**
1021. Florence Sheppard. F. 21. 9 Aug.—20 Sep. **43 days.**
Chorea at 14, and again at 20. Mastoid operation 5 weeks ago. Chorea 4 weeks. Six months pregnant. Movements of head and arms. Chloretone **9 days.**
- 1115.* Lily Stocks. F. 16. 31 Aug.—10 Oct. **40 days.**
Chorea a year ago. Compound mitral disease. Movements general. Chloretone **17 days.**
1252. Jessie Adams. F. 7. 2 Oct.—19 Oct. **17 days.**
Chorea 1 month. Movements general. No notes of Chloretone.
1298. Margaret Edwards. F. 7. 12 Oct.—3 Dec. **54 days.**
Measles, pertussis, scarlatina, 20 weeks ago. Aortic and mitral regurgitation. Chorea developed 2 Nov. Death resulted from heart disease with dropsy 14 days after cessation of choreic movement. Chloretone **17 days.**
- 1301.* Violet Day. F. 5. 13 Oct.—23 Oct. **10 days.**
Chorea 3 days. Chloretone **6 days.**

Register No.

- 1353.* Kate Newcombe. F. 14. 23 Oct.—9 Nov. **17 days.**
Chorea 3 years ago in North, 11 days. Present attack
2 weeks, affecting right side. Chloretone **6 days.**
1374. Hilda Wixon. F. 11. 29 Oct.—19 Nov. **21 days.**
Chorea 5 years ago. Chloretone **7 days.**
- 1398.* Violet Day. F. 5. 4 Nov.—31 Dec. **57 days.**
No notes.
- 1544.* Kate Newcombe. F. 4 Dec.—14 Dec. **10 days.**
Chorea 1 month ago. Movements 2 days.
Chloretone **5 days.**

1910.

- 26.* Dorothy Drake. F. 16. 8 Jan.—30 Mar. **81 days.**
Violent choreic movements. Delirious. Presystolic murmur.
Owing to weakness and mental state the patient was retained
in hospital for general treatment and massage for 2 months.
Chloretone **20 days.**
- 352.* Violet Day. F. 6. 21 Mar.—14 May. **54 days.**
No notes.
- 643.* Lily Ward. F. 16. 25 May—14 June. **20 days.**
No notes.
631. Marjory Stokes. F. 8. 23 May—9 June. **17 days.**
Varicella and measles. Has suffered from chorea 6 months.
Choreic movements well marked. Knee jerks absent. Mitral
regurgitation. Spontaneous movements ceased 27 May.
Chloretone **10 days.**
915. Albert Bailey. M. 10. 27 July—27 Aug. **31 days.**
Rheumatism and mitral regurgitation 3 years before.
Unable to use limbs. Choreic movement slight.
Chloretone **15 days.**
991. Lily Terry. F. 18. 15 Aug.—13 Sep. **29 days.**
Chorea 1 week. Chloretone **20 days.**
1012. Louisa Habbigam. F. 14. 20 Aug.—15 Sep. **26 days.**
One week. Movements general. Fell out of bed. Mitral
regurgitation. Chloretone **10 days.**
1018. Rosina Genery. F. 27. 23 Aug.—1 Oct. **39 days.**
Nine months after confinement. Chorea commenced 3 weeks
before admission. Unable to speak. Delirious.
Chloretone **3 days.**

Register No.

- 1156.* Dorothy Drake. F. 16. 24 Sep.—2 Nov. **39 days.**
Fourth attack. Required strapping down in bed. Com-
menced 14 days before admission. Chloretone **15 days.**
1197. May Scarlett. F. 12. 5 Oct.—2 Nov. **28 days.**
Three weeks chorea. Cannot feed herself.
Chloretone **10 days.**
1233. Doris Dalton. F. 8. 12 Oct.—23 Nov. **42 days.**
Chorea 1 week. Cannot feed herself. Movements general
and violent. Chloretone **10 days.**
1384. Ernest Brooks. M. 18 Nov.—2 Dec. **14 days.**
Chorea 3 weeks. Movements general. Chloretone **5 days.**
- 1397.* Ivy Osmond. F. 11. 21 Nov.—17 Jan. **59 days.**
While convalescing from rheumatism in the ward chorea
developed 21 Dec. Chloretone **10 days.**
1443. Edith Grant. F. 14. 1 Dec.—19 Dec. **18 days.**
Seven weeks chorea, after scarlet fever. Second attack.
Mitral regurgitation. Chloretone **11 days.**
- * Albert Withall. M. 11. 31 Dec.—28 Feb. **59 days.**
Chorea in 1908, preceded by rheumatism and scarlatina.
Rheumatism since 19 Dec. Chorea commenced 27 Dec.
Chloretone **4 days.**

1911.

37. Lily Goodall. F. 16. 11 Jan.—3 Mar. **51 days.**
Scarlatina and chorea previously. Chorea for 4 weeks.
Well marked movements. Chloretone **26 days.**
186. Alfred George Hiffil. M. 20. 15 Feb.—14 Mar. **27 days.**
Chorea. Head, arms and legs. Anæmia (chlorotic).
Chloretone 5 grains thrice daily. **5 days.**
- 195.* Ivy Osmond. F. 11. 16 Feb.—28 Mar. **46 days.**
Rheumatism and chorea just previously. Recrudescence on
returning from convalescent home. Chloretone **11 days.**
- 247.* Dorothy Drake. F. 17. 25 Feb.—16 May. **80 days.**
Four previous attacks. Had recently been sent to Clacton
after severe headache, and there developed present attack,
attributed to swinging. Very violent movements of trunk.
Padded sideboards needed. Mental automatism marked.
Chloretone 10 grains every four hours for 7 days; 5 grains for
6 days. Hot packs. Pericarditis. Two short relapses of
movements. Chloretone **13 days.**

Register No.

253. Lizzie Maym. F. 15. 1 Mar.—4 Apr. **33 days.**
Chorea 2 months. Now movements mostly in legs. Recovery delayed by cardiectasis. Chloretone **6 days.**
431. Doris Phenix. F. 10. 13 Apr.—23 May. **40 days.**
Chorea 2 years ago. Present attack 3 weeks. Paralytic type, with inability to speak or feed herself. Incontinence of urine.
Chloretone **5 days** only, as movements were inconspicuous.
- 436.* Albert Withall. M. 11. 14 Apr.—6 May. **22 days.**
Previous attack of chorea till 28 Feb. Complicated by mitral and aortic regurgitation and albuminuria, rheumatism, and scarlatina. Chloretone 5 grains thrice daily. **6 days.**
531. Edna Darton. F. 9. 10 May—17 June. **38 days.**
Three weeks ago bitten by a dog. Movements continued ever since, most marked in head and arms. Cannot feed herself. Erythema, no fever.
Chloretone in diminishing doses **10 days.**
1073. Dorothy Pitts. F. 20. 13 Oct.—23 Oct. **10 days.**
Chorea 8 years ago. Very slight attack from over study.
1223. Winifred Sharp. F. 10 Nov.—6 Dec. **26 days.**
Chorea 2 months. Mitral regurgitation.
Chloretone **2 days.**
1304. Elizabeth Elliott. F. 8. 8 Dec.—22 Apr. **135 days.**
Chorea in April. Recurrence 14 days. Pronounced general movements. Pericarditis with friction. Effusion and adhesion. Fatal.
Chloretone **14 days.**
1376. Hilda Parsons. F. 9. 28 Dec.—2 Mar. **64 days.**
Movements pronounced, 1 month. Marked constipation.
Chloretone **11 days.**

1912.

2. Edith Emmett. F. 12. 1 Jan.—23 Mar. **81 days.**
Chorea 2 years ago. Rheumatism 5 years ago. Chorea 14 days. Well marked movements. Convalescence very slow owing to flaccidity of muscles. Chloretone **7 days.**
110. Archibald Dell. M. 23. 24 Jan.—19 Feb. **26 days.**
Severe chorea at 11. Three months twitching of arms and head, and less in legs. Worse third week.
Chloretone **3 days.**

Register No.

162. Fred. Trott. M. 16. 6 Feb.—13 Mar. **35 days.**
Chorea 14 days. Chloretone **14 days.**
233. Edith Taylor. F. 12. 21 Feb.—20 Mar. **27 days.**
Three months ago rheumatism. Three weeks chorea.
Movements well marked and general. Systolic mitral murmur.
Chloretone **11 days.**
287. Willy Newick. M. 10. 4—16 Mar. **12 days.**
Chorea 2 weeks. Mild. Arsenical iron only.
442. Nellie Harper. F. 7. 3 Apr.—8 May. **36 days.**
Chorea 2 weeks. Movements general. Chloretone **9 days.**
- 954.* Ida Bruce. F. 16. 31 July—15 Aug. **15 days.**
Five previous attacks since 8 years old. Slight mitral
regurgitation. Movements general. Chloretone **7 days.**
865. Lily Bennett. F. 18. 9 July—6 Aug. **28 days.**
Chorea 1 month, due to shock. Head and left side.
Previous attack at 8½. Mitral regurgitation.
Chloretone **14 days.**
1023. Rose Smith. F. 6. 15 Aug.—18 Sep. **34 days.**
Chorea 14 days. Face and limbs. Mitral regurgitation.
Rejected all medicine. Chloretone 3† grain doses in enema.
3 days.
1211. Robert Ingle. M. 16. 27 Sep.—11 Oct. **14 days.**
Third attack, one month duration. Movements left arm
and leg. Mitral regurgitation. Chloretone **6 days.**
- 1239.* Trixie Fischer. F. 9. 3 Oct.—9 Nov. **37 days.**
Second attack. Associated neurosis 3 weeks.
Chloretone **12 days.**

† It is to be regretted that the notes in a few of these cases are incomplete, and that the drug under consideration was not administered on a more uniform plan; but as this series represents the first cases of Chorea so treated, it has been thought desirable to publish them with such details as were available, so that the reader may draw his own conclusions from the effect of treatment in different types of cases.

SOME NOTES ON THROMBOSIS.

By SOMERVILLE HASTINGS,

SURGEON TO THE THROAT AND EAR DEPARTMENT OF THE HOSPITAL.

THE observations herein described were carried out in 1906—08, when the writer was much interested in the causation of pulmonary embolism in surgical cases, and though the results are mainly negative they are, perhaps, worth briefly recording.

Pulmonary embolism of a sufficient degree of severity to produce definite symptoms, but insufficient to prove fatal, is by no means rare in surgical cases. There is usually a sudden attack of dyspnoea, followed by raised temperature and blood-stained expectoration; sometimes a patch of dulness over one lung can be made out. The condition of the blood in one such case was investigated. The coagulability of the blood has been taken before and after operations, and a search made for organisms both in the blood-clot and in the blood stream generally in cases of spontaneous and post-operative venous thrombosis.

An attempt has been made to answer the following questions:—

1. Is there any increase in the coagulability of the blood after a surgical operation?
2. Is there any increase in the coagulability of the blood generally in cases of thrombosis?
3. Are organisms present in the blood-clot in cases of thrombosis?
4. Are organisms present in the blood stream in such cases?

METHOD.

The coagulability of the blood was determined by a modification of Wright's method, described in the "British Medical Journal," 1894, vol. i., p. 237, and "Lancet," 1902, vol. ii., p. 16. The blood is drawn into a series of capillary tubes, calibrated so that a length of five centimetres exactly holds five cubic millimetres. These are kept at the body temperature, and their contents blown out on to blotting-paper at increasing intervals of time. That interval, after which the

smallest trace of clot remains on the blotting-paper, the blood having been absorbed by it, is taken as the coagulation time. Two minutes twenty seconds is approximately the normal coagulation time in an adult. The method seems fairly reliable.

The examination of thrombosed veins for organisms was carried out as follows: The portion of vein affected was ligatured at each end, excised, and then wrapped in sterile gauze. Its outer surface was seared with a hot instrument and incised with a sterile knife. Cultures from the contained clot were taken with a platinum loop, and portions of the clot were also squeezed out directly into broth tubes. The following media were inoculated and incubated both *æ*robically and *anæ*robically: Peptone broth, "Nasgar," Agar, Glucose Agar (stab culture), Glucose Litmus broth, Milk, and Gelatin.

RESULTS.

1. *Coagulability of blood after a surgical operation.*—This was investigated in four patients—three men and one woman. The operations were radical cure of Inguinal Hernia, for Hæmorrhoids and Fissure, for Gall Stones in the common duct, and amputation at the shoulder for Myeloid Sarcoma of the humerus. The results are best seen in the form of a Table:—

INGUINAL HERNIA.				HÆMORRHOIDS AND FISSURE.			
		Mins.	Secs.			Mins.	Secs.
1 day before operation	-	2	20	1 day before operation	-	2	45
1 „ after „	-	2	0	1 „ after „	-	2	30
3 days „	-	2	10	3 days „	-	2	45
5 „ „	-	2	10	5 „ „	-	2	45
8 „ „	-	2	20	7 „ „	-	2	30
GALL STONES IN COMMON DUCT.				AMPUTATION AT THE SHOULDER.			
		Mins.	Secs.			Mins.	Secs.
1 day before operation	-	2	15	7 days before operation	-	2	0
1 „ after „	-	2	12	1 day after „	-	2	15
5 days „	-	2	12	5 days „	-	2	15
7 „ „	-	2	12	7 „ „	-	2	15
9 „ „	-	2	36	9 „ „	-	2	15
13 „ „	-	2	30	12 „ „	-	2	30
17 „ „	-	3	0	15 „ „	-	2	30
19 „ „	-	3	36	17 „ „	-	2	45
21 „ „	-	3	30	19 „ „	-	3	0
27 „ „	-	3	30	21 „ „	-	3	45

It is, of course, impossible to draw any reliable conclusions from four cases, but, as far as these observations go, they indicate that so far from there being any increase in the coagulability of the blood in these cases there is rather a decrease, which commences about the ninth day after operation.

2. *Coagulability in cases of Thrombosis*—Five of these cases were investigated, and again the results are best shewn in the form of a Table:—

Nature of Case.	Site of Thrombosis.	Interval between Thrombosis and Examination.	Coagulation time.
Varicose Veins - -	Left internal Saphenous at level of knee.	About 12 days -	2 mins.
Varicose Veins - -	Right internal Saphenous just above knee.	6 days - - 13 „ - -	2 mins. 40 secs. 2 „ 30 „
Appendix Abscess -	Left Femoral in Scarpa's Triangle and Hunter's Canal.	1 day - - 2 days - -	3 mins. 10 secs. 3 „
Nephrectomy for Tuberculous Kidney.	Left Femoral - -	2 days - -	3 mins.
Abdominal Hysterectomy for Fibroids.	Left Femoral in Hunter's Canal.	3 days - -	2 mins. 15 secs.

It cannot be said that there was any definite increase in coagulability of the blood observed in any one of the above cases.

The last case, one of thrombosis with embolism, is of sufficient interest to report in detail. On 12 October 1907 a woman of 48, weak and anæmic from loss of blood, had an abdominal hysterectomy performed for uterine fibroids. A pint of saline was left in the abdominal cavity. The day following the operation the temperature rose to 100°, and remained at about this level for the next four days; it then gradually fell to the normal. On 26 October the temperature again rose, and the next day the patient began to feel unwell and to complain of pain in the left side of the chest, just below the breast, at which situation a localised friction sound

was heard. The expectoration was blood stained, and thrombosis of the lower part of the left femoral vein was observed. By 30 October the temperature had fallen to normal, but on that day the patient, who was sitting up at the time, was suddenly seized by urgent dyspnœa and fell back unconscious with dilated pupils and rapid pulse. She recovered consciousness a few minutes later, and began to complain of pain in the left leg. Ten grains of sodium citrate were administered three times a day from this date until the patient's discharge.

On 4 November there was a further attack of severe pain in the left side of the chest. The same day two cubic centimetres of blood were removed from a superficial vein at the wrist and examined bacteriologically, but no organisms were found. The abdominal wound healed by first intention, and the patient rapidly regained strength and left the Hospital cured on 23 November.

The case is of interest because it shews that every attack of pulmonary embolism is not necessarily fatal. There were two, if not three, in the above case, and yet the patient recovered. The probable source of the embolus in the femoral vein is also indicated, and the slight rise of temperature in the early stages demonstrates the probable cause of the thrombosis in some minor degree of septic infection. From 30 October, the day of the severe attack of dyspnœa, the coagulability of the blood was taken at frequent intervals. The results were as follows:—

October 30th	-	2 minutes 15 seconds.
„ 31st	-	2 „ 15 „
November 1st	-	2 „ 20 „
„ 2nd	-	2 „ 40 „
„ 4th	-	2 „ 50 „
„ 7th	-	2 „ 50 „
„ 9th	-	3 „ 0 „
„ 11th	-	2 „ 55 „
„ 13th	-	2 „ 50 „
„ 15th	-	3 „ 0 „
„ 15th	-	3 „ 5 „
„ 20th	-	3 „ 5 „
„ 23rd	-	3 „ 5 „

No doubt the steady decrease in coagulability in this case

was mainly due to the partial decalcification of the blood by the sodium citrate taken.

3. *Organisms in blood clot.*—In six cases a part of a vein containing clotted blood was excised during life and examined bacteriologically by the method described above. The following Table shews the results obtained:—

Nature of Case.	Site of Clot.	Interval between Thrombosis and Examination.	Organism found.
1. Varicose Veins -	Left Internal Saphenous at level of knee.	About 12 days -	Sterile.
2. Varicose Veins -	Right Internal Saphenous just above knee.	6 days - -	Sterile.
3. Bruised Veins -	Internal Saphenous -	? - - -	Sterile.
4. Varicose Veins -	Left internal Saphenous in leg.	About 31 days -	Staphylococcus albus.
5. Varicose Veins -	Left internal Saphenous in upper third of thigh.	About 25 days -	Staphylococcus albus.
6. Varicose Veins -	Right internal Saphenous just below knee.	About 41 days -	Staphylococcus albus.

The growths obtained from Case 4 had the following characteristics: On the second or third day after inoculation and incubation at 37° C. signs of growth began to appear. The growth was most evident on broth in both ærobic and anærobic cultures. It was easily sub-cultured from broth to other media. A moist white growth was obtained on Agar, "Nasgar," serum and potato; gelatin was liquified, and milk was coagulated. Glucose litmus broth became acid. A hanging drop from the broth culture contained cocci, which tended to be grouped in pairs. They were Gram positive. The growths from Cases 5 and 6 were exactly similar to the above, except that in Case 5 gelatin was hardly at all liquified, and that the organisms in Case 6 were not quite circular but rather flattened. As gelatin was very slowly liquified in Case 5, the organism would be described as *staphylococcus epidermidis albus* by Welch.

Staphylococcus albus is so often present in various normal and pathological tissues, that it is doubtful if its presence in these last three cases has any causative significance.

4. *Organisms in blood in thrombosis.*—Only two cases were investigated in this connection, and in both the blood proved sterile. Two cubic centimetres of blood were drawn off from the median basilic vein in one case, and from a superficial vein near the wrist in the other, and cultures made on broth (blood added to several tubes in different amounts), Agar, and “Nasgar.” The details are given in the Table below:—

Nature of Case.	Site of Thrombosis.	Interval between Thrombosis and Examination.	Organisms.
Appendix Abscess -	Left Femoral - -	3 days - -	Sterile.
Abdominal Hysterec- tomy.	Left Femoral - -	5 days - -	Sterile.

CONCLUSIONS.

Though quite inconclusive, the observations above described tend to indicate:—

1. That there is no general increase in the coagulability of the blood after a surgical operation.
2. That there is no general increase in the coagulability of blood in cases of spontaneous and post-operative thrombosis.
3. That in cases of spontaneous thrombosis *staphylococcus albus* is sometimes present in the clot.
4. That no organisms are present in the blood stream in cases of post-operative thrombosis.

RHEUMATIC RASHES AND THEIR SIGNIFICANCE.

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SINCE increased attention has been paid to rheumatism in childhood, and recognition has been given to the fact that acute arthritis as a manifestation is the exception rather than the rule at this period of life, it has been realised how much commoner the disease is than was formerly thought.

Langmead found that amongst London school children at the age of fourteen it occurred in a well marked form in nearly 9 per cent. But though much has been written on the heart affections of rheumatism and on chorea, little attention has been paid to the rashes, and they are usually dismissed in two or three lines in the text-books devoted to the diseases of children.

Samuel West has recently stated that with a more accurate diagnosis of the disease, rheumatic rashes, with the exception of the sudamina, have diminished almost to vanishing point. He was probably writing of adults, in whom they are comparatively rare, but in children they are seen not infrequently, and may even give the first clue to the disease.

The sudamina, which he considers the commonest, are rare in childhood, being dependent on the profuse acid sweats, which are seldom met with save in adults. They are of little interest or importance.

The commonest and most characteristic rashes in children are the erythemata, first associated with rheumatism by Rayer in 1835. To a general recognition of their specific nature we are most indebted to Cheadle, who described them, and gave a beautiful plate in his Harveian Lectures in 1888. They are very variable, but can be divided into two groups, the first containing urticaria and erythema exudativum multiforme, and the second erythema nodosum. I have separated

these merely on clinical grounds. Strictly erythema nodosum is a special form of exudative erythema.

Erythema scarlatineforme has been described as a rheumatic rash, but in all the cases in which I have seen it, it could with more probability have been attributed to drugs. I can find no figures which shew their prevalence.

In my series of cases of chorea under the age of 12, excluding erythema nodosum, rashes occurred in 4·23 per cent., and in cases of acute rheumatism in 4 per cent. Subcutaneous nodules were present in about 7 per cent. of the cases of chorea, and in over 10 per cent. of cases of rheumatism with arthritis. In later life rashes are commoner than nodules.

I have followed the usual practice of separating urticaria from erythema exudativum multiforme, but it seems to me that it should be included under this title, both on histological and clinical grounds. It is fairly common, but less so than the ringed and papular rashes.

In erythema multiforme various degrees of exudation are seen; in some examples the rash is raised considerably above the level of the surrounding skin, and in others is scarcely perceptible except by its colour. There is a corresponding difference in the subjective symptoms it causes. Some of these rashes are not felt at all, others produce considerable urtication, usually in proportion to the degree of exudation present.

The following are the forms of erythema exudativum multiforme:—

Erythema annulatum, Circinatum, or Mar- ginatum.	Rings which gradually spread, the edge remaining bright, and the central portion fading to a pale brown colour.
Erythema gyratum or figuratum.	These are caused by one or more rings coalescing and forming irregular serpentine figures.
Erythema iris.	One or more rings inside another.
Herpes iris.	Very rare in rheumatism; the eruption is partially or completely bulbous.
Erythema papulatum.	Dark purplish red papules the size of a split pea or smaller, and shewing little or no tendency to grow in size. They often become slightly hæmorrhagic, and nearly always leave a brown stain as they fade away.

The last-named form is usually met with on the extensor surfaces near the knees and elbows, and is symmetrical. More rarely it appears on the trunk and other parts of the limbs. It tends to appear in successive crops, each lasting for a few days. The others may be localised or general, and are commonest on the limbs, and less often seen on the trunk and face. They may be very evanescent or may last as long as ten days. For instance, in one case a boy, who had lately had pericarditis, had erythema annulare on the buttocks on three successive nights, the rash remaining visible for an hour or two and then disappearing; on the fourth night it appeared again, and remained for nearly a week with little alteration.

Individuals who have had a rheumatic rash once are liable to develop it again, but not always of the same type. For instance, I remember a boy who had attacks of rather chronic chorea with a long continued but low degree of pyrexia, and who on two occasions during his attack of chorea developed urticaria. A man aged 31 had erythema gyratum twice at the beginning of a rather prolonged attack of rheumatic fever. A child with severe mitral disease had erythema annulatum three times, and nodules twice, while under observation. These recurrent attacks are not surprising when we consider how often the rheumatic organism lives for many years, only shewing activity at intervals, in the same way as the hæmamœba of malaria, or the spirochæte of syphilis. And, as in the last-named disease, it tends to shew its activity in the same guise in the same patient, though one tissue may be specially selected in one instance, and another tissue in another, a fact which may be dependent on the special strain of organism or on the idiosyncrasy of the sufferer.

Rheumatic manifestations were divided into two groups by Garrod—the hyperæmic and the fibrous. In the former class he placed tonsillitis, arthritis, and some cases of pericarditis. They are usually associated with a considerable degree of pyrexia, and yield readily to salicylates. They may be, as he has suggested, entirely due to toxins, or, as I think is more probable, to a special stage in the life history of the organism, which in this and other respects resembles a protozoon. In the fibrous group are those chronic inflammations of the nasopharynx which so often require operative interference, and the

cases of arthritis in which the inflammation tends to remain in one joint for a considerable period. Microscopic submiliary nodules have been found by Coombs in one of these cases. Endocarditis, interstitial myocarditis, and pericarditis—in all of which submiliary nodules are common—pleurisy, subcutaneous nodules, and possibly chorea are further examples. This group is associated with low intermittent and long continued pyrexia, and does not yield to salicylate treatment. It is probably due to a different phase in the life history of the parasite. It is to this class that the most insidious and intractable cases of rheumatism belong, and it is in association with them that the rheumatic erythemata are usually seen. Though it is a toxic phenomenon the toxins are probably derived from these deep-seated areas of chronic inflammation. They are, therefore, a sign of grave rheumatism, and have something of the same sinister significance as subcutaneous nodules.

In 1911 I published a paper, based on statistics obtained by the kind permission of the authorities at the Hospital for Sick Children, Great Ormond Street, in which I shewed that the heart lesions belonging to the fibrous class occur equally in cases of rheumatism treated with salicylates or otherwise. The same was also true of subcutaneous nodules, which developed in eleven cases treated by salicylates (in three taking between 200 and 300 grains of sodium salicylate a day), and in five treated by other means. Salicylates are, of course, given more often in the severer cases, and to this is due the fact that nodules developed more often in cases treated in this way than under indifferent treatment. Though the number of cases in which rheumatic erythemata appeared was much smaller (fourteen altogether), six appeared in cases under the influence of salicylates, and eight in cases treated on other lines. The numbers are too small to be conclusive, but so far as they go seem to prove that salicylates will not prevent the appearance of the rheumatic erythemata. This I believe to be true, though it is contrary to the view usually adopted.

Erythema nodosum, so closely allied to the exudation erythemata, has a different clinical significance. It may be a rheumatic rash in some cases, but it is remarkable how few of the cases in which it occurs give any history of rheumatism or shew any rheumatic lesions. I have seen one case in which it

developed during an attack of rheumatic fever, and another in which it appeared in a case of mitral stenosis with progressive disease of the myocardium. The rarity with which it is associated with heart lesions has been frequently commented upon. Joint pains and tonsillitis, with which it may be accompanied, and which have been regarded as proof of its rheumatic nature, are found in many acute diseases, and are by no means always present in erythema nodosum. Laudouzy and others have advanced the view that it is an early sign of tuberculosis. It is said that children in which it occurs give a positive Von Pirquet's skin reaction, and shew definite tuberculous lesions a few months later. I have only seen one such case, a girl of eight years of age, who developed the rash in October 1911 without any history or signs of rheumatism. In January 1912 she had signs of tuberculosis of the apex of the left lung, and by the end of March the whole lung was involved. I have also seen it in association with streptococcal pyæmia, no endocarditis and no tuberculous lesions being found post-mortem. It has also been met with in measles and other fevers. From its pathology there is no valid reason for separating it from the erythema multiforme group, and perhaps in the true rheumatic cases it may have the same significance as the other members.

Osler has collected three series of cases of severe recurrent forms of erythema multiforme, in which urticaria, giant urticaria, circumscribed œdema, exudative erythemata, including erythema nodosum, herpes iris, and purpura, superficial or deep-seated, are the skin manifestations. All, or many of these, may occur simultaneously; but frequently only one, most often purpura, occurs in each attack. The mucous membranes are often affected. Hyperæmia of the fauces, urticaria and hæmorrhages here or elsewhere are common, and arthritis is frequently noticed. Visceral manifestations often accompany the other lesions, abdominal crises and nephritis being the most usual. Pericarditis and endocarditis are rare. The disease may last with frequent recurrences for many years and is often fatal. The diseases described as Peliosis rheumatica, purpura rheumatica, and Henoch's purpura are probably merely forms of this protean disease. It is still often considered to be rheumatic, and in a series of some typical cases

collected recently by Schloss, cardiac lesions were found; but there appears to be no connection whatever between the two diseases. Purpura, however, does undoubtedly occur as a rheumatic rash. It is usually seen over the lower part of the legs, and the spots are simple and of moderate size. The cases I have seen have been for the most part between the ages of ten and sixteen, and it has appeared at the end of a long and exhausting attack of rheumatism, and has usually followed pericarditis.

Recurrent purpura, with cardiac lesions, is usually due to ulcerative endocarditis, either primary, or as so often happens, grafted on to a rheumatic lesion.

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AN UNUSUAL CASE OF CARCINOMA OF THE PELVIC COLON.

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THE following case of cancer of the pelvic colon presents some features of interest and importance, both from the pathological side and also from the clinical point of view, which is so essentially dependent on pathology in cases of this character.

The patient, G. S., was a man aged 45, who was admitted to the Middlesex Hospital complaining of persistent "diarrhœa," from which he had suffered for about nine months. He had noticed some discharge of mucus from the rectum, and also that he had passed blood from the bowel on several occasions. The patient stated that he had been losing weight throughout the whole course of his illness, and that he had suffered a great deal of pain, but that this was present only during defecation.

On examination his abdomen was quite soft, and only slightly distended over the course of the transverse colon. In the middle line, above and behind the pubes, a hard mass about the size of a cocoanut could be felt. On digital examination the rectum was found to be "ballooned," but the tumour could not be reached with the finger.

After sigmoidoscopy it was decided that the tumour should be explored, and it was then found to be growing in the pelvic colon and nearly filling the pelvis. The bladder was seen to be lifted up and spread over the front of the tumour. A length of pelvic colon was excised with some difficulty, the cut end of the sigmoid flexure was sutured to the wound, and the lower part of the rectum was closed with sutures.

The patient did not suffer much from "shock," but the case ended fatally two days after operation with great dilatation of

the colon, every effort to get the bowel to empty itself having failed. To my mind the case is none the less instructive, for I believe that in a similar case a successful result might be obtained. Cancer in the intestine first endangers life by causing a partial or complete obstruction, and if the upper part of the colon had been given time to regain its tone by a preliminary colostomy, which would have been performed if the nature of



Section of Growth in Intestine.

the case had been apparent without an exploratory incision, I think the radical operation would have been successful. The case emphasises the fact that the pelvic colon, when the site of a very large malignant tumour, may be removed by operation with some prospect of success, for some of the carcinomata of the intestine may grow to an enormous size and still be confined to the limits of the bowel.

The information obtained by a study of the pathology of

these tumours is not only of scientific interest, but has a very important bearing on the question of treatment. It is well known that cancerous growths of the bowel vary greatly in their malignancy. A case of carcinoma of the rectum must not be condemned as inoperable on account of its size alone, for, as emphasised by Paul, the big encephaloid cancer of the bowel is one of the least malignant kinds of cancer met with in the body. In deciding whether a large cancer of the pelvic colon is operable or not the surgeon must bear in mind that tumours of this type shew very little tendency to disseminate.

In the present case, relying on what is known of the pathology of these tumours, and encouraged by the fact that the patient had only suffered pain during defecation, suggesting that the growth had not extended beyond the bowel wall, I decided to attempt excision. The post-mortem findings shew that on pathological grounds the operation promised to be of value and radical in its nature.

It is in cases such as this that excision, though surgically difficult, may be followed by the best results, and is justified in spite of the immediate risks. On the other hand, a smaller infiltrating growth is often associated with such wide secondary dissemination by glandular and other involvement that though excision may be easy the operation is of no real value, since a colostomy would have prolonged the patient's life just as much without needlessly exposing him to the danger of an extensive operation.

On making a vertical section through the portion of pelvic colon removed at operation, a large projecting growth was seen springing from the wall of the bowel. That part of the wall to which the core of the growth was attached was definitely invaginated. Although the growth could be followed continuously round the whole circumference of the bowel, the main bulk presented the appearance of a large pear projecting into the hollow of the viscus. This portion of the tumour measured $4\frac{1}{2}$ inches in length, and $3\frac{1}{2}$ inches at its widest part. It was possible to pass the fingers between the wall of the bowel and the erect pear-like tumour, since the latter was only attached to the wall of the intestine near its stalk. Some 2 inches above this point of attachment a cluster of small

nodular growths were seen projecting from the mucous membrane of the bowel, representing in all probability surface efflorescences from the permeated lymphatics which, Mr. Sampson Handley has pointed out, may extend for a considerable distance above the level of the main mass of the growth.

Microscopically the growth proved to be a columnar-celled carcinoma, consisting of large numbers of tubules lined with columnar epithelium, so that an adenomatous type was retained. Definite infiltration of the wall of the bowel was seen, but to a less extent than is usual in malignant cases. The question arises in this case as to whether such a large tumour, shewing such a slight degree of ulceration as the one here described, may not have arisen from a simple polyp of the bowel. Polyps in this situation include tumours such as adenomata, papillomata, and fibromata, and if either of the two first-mentioned growths were to undergo malignant changes, a tumour similar to the one here described would result. The so-called villous tumour of the rectum occurs as a solitary broad-based papilliferous or cauliflower-like growth, and it is usually wise to consider such forms as lying on the border line of malignancy, and to treat these tumours, if seen sufficiently early, by free excision of their base, for evidence is not wanting to shew that such growths fall into line with papillomata of the pelvis of kidney, and bladder in the tendency which they exhibit towards a cancerous state.

A NOTE ON UNNECESSARY DRESSINGS.

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I HAVE felt for some time that the careful application of layer after layer of dressings to closely sutured operation wounds was possibly an unnecessary waste of time, energy, and material. An article by Mr. Reginald Alcock on "Iodine as the sole dressing for Operation Wounds," in the "British Medical Journal" for February 3rd of this year, therefore naturally aroused my interest. His results were so good that I felt not only justified, but encouraged in giving the method a trial.

During August and September I used no dressings in over fifty cases of operation where it was possible to suture the wound closely. The cases included twelve operations for the radical cure of hernia, twelve appendicectomies, four cœliotomies, two nephropexies, two operations for undescended testis, six for the removal of superficial tumours, and others.

Tincture of iodine was painted over the wound directly after the operation was finished, the area being dried with ether beforehand if at all moist. The iodine was reapplied a few times during healing, and again when the sutures were removed.

At no time was any dressing applied in these cases. I only used the tincture of iodine and discarded dressings in those cases where the wound was closely sutured, but in a few cases when dressings were considered necessary at first (*e.g.*, amputation of the breast until the drainage tube was removed, and excision of varicose veins to support the limb for forty-eight hours), they were removed as soon as possible and the iodine solution applied.

The results have been most gratifying, for not only has apparently unnecessary trouble been saved, but the patients

have expressed themselves as being most comfortable. One or two patients who had undergone operations before and had experienced the discomfort of dressings and bandages were very pleased to be without these encumbrances. I consider that the wounds healed even better than when dressings are employed, and in no case in which I used the method did the slightest inflammatory reaction occur. Whether the iodine has a beneficial effect by hardening and disinfecting the skin I do not know, and possibly the wound would have done just as well without the applications. But, whether the iodine be necessary or not, dressings seem quite unnecessary for keeping sutured wounds aseptic, and may even do harm by promoting sweating and aiding the growth of bacteria.

Since I gave the method a trial two other surgeons have published their results, and they have been consistently good. Mr. Madden, in the "British Medical Journal" of September 28th, reported that he had tried the method in over fifty cases and obtained nothing but good results, even in the class of patients with whom he has to deal at the Kasr el Ainy Hospital, Cairo. Fleet Surgeon Dalton also published seventy-seven cases in the "British Medical Journal" of the same date, and expressed himself as perfectly satisfied with the results. It is important to suture closely and accurately, and to be careful to secure perfect hæmostasis, but apart from these points no special precautions seem necessary.

METHODS IN MENTAL THERAPEUTICS.

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WHILE everyone will agree that the state of the mind may often be improved by attention to the health of the body, it must nevertheless be admitted that in a number of instances the failure of mental power is the primary event. In such cases, although the health of the body must never be lost sight of, it is by direct attention to the mental attitude of the patient that one may hope to attain the best results. To be successful it is generally essential, as in other forms of illness, to deal with the disease while it is still in an early stage of development. It is one thing to correct an erroneous train of thought which is of recent origin, and quite another to deal with a state of mind that has gradually but firmly been built up on the basis of erroneous ideas over a long period of time. The latter may not be incurable, but it is infinitely more complicated and difficult to approach.

It must be understood at the outset, therefore, that there are very distinct limitations in the possibilities of the treatment of mental disorder by mental methods, for not only are long-standing cases usually difficult to treat, but cases which depend upon the presence and progress of degenerative disease which is disintegrating the nervous elements of the brain, e.g., in general paralysis, are also outside the possibility. In every day practice, the cases that are in the main most suitable for treatment, and likely to be benefited by methods of psychotherapeutics, are those usually grouped under the headings of neurasthenia, psychasthenia, hysteria, hypochondriasis, depression of slight intensity in which there are no delusions or suicidal tendencies, and occasionally delusions of recent development which appear to have arisen in direct association with some definite illness of the mind or body, and which one trusts will be largely dispelled by a general improvement in health. Discrimination must be exercised in choosing suitable

cases for treatment, and especial care must be taken to exclude such persons of unsound mind who are primarily in need of suitable restraint to prevent them being a danger to themselves and to others. In a general way it may be said that the object of treatment is to modify the patient's outlook on things, and this is especially so in the case of the neurasthenic and psychasthenic. The principal methods by which this object may be obtained are three, viz., suggestion, persuasion, and psycho-analysis. By "Suggestion" an endeavour is made to substitute one train of thought for another, to lead the patient's thoughts into a new line, so to speak. It is an important method, but its weakness apparently lies in the fact that it deals with the surface of the mind, and where the troubles depend upon ideas which are deep seated the source of the disturbance is not always reached.* It is, however, very useful in many cases where the trouble is of recent origin, and every one knows how it may turn the thoughts away from unpleasant channels, and transform a condition of temporary depression into one of comfort. When reinforced by silent surroundings which conduce to quietness of mind, it is in many instances a therapeutic measure of great value for calming the mind and inducing sleep, which is often the first step towards recovery. "Persuasion," which has been especially methodically practised by Dubois, is the second method, and here, as the term implies, the object is to reason the patient out of his vague fears and erroneous views. The fallacy of his arguments must one by one be dispelled, and an endeavour must be made to make him understand himself better, and to create for himself a philosophy of life which will keep his mental attitude steady and lead him to see things more as they are, and to balance them with some accuracy according to their importance. The next method is that of Psycho-Analysis, which is associated with

* It is wise, however, to keep the methods of psychotherapeutics separate from the explanation regarding their actions. It may be taken for granted as correct that suggestion, persuasion, and psycho-analysis are all useful in certain cases, but it cannot be regarded by any means as certain that the explanations regarding the way in which results are produced are so correct. Much of such explanation must necessarily be hypothetical. Suggestion is obviously involved in the method of "Persuasion," and some believe it is also a predominant feature in psycho-analysis, a view which is, however, strongly repudiated by most of the followers of Freud.

the names of Breuer and Freud, and concerning some aspects of which there is much difference of opinion. In this Paper only its barest principle will be outlined, and no attempt will be made to enter into its many controversial aspects. Whether the method is or is not as original or as curative, or as accurate as its followers claim it to be, most people will probably admit the underlying principle upon which it depends to be sound, since that principle is to analyse out the trains of thought until one arrives at the base from which the errors have sprung.

The method was first evolved in connection with hysteria, and the hypothesis supposes that a complex (i.e. a group of ideas with an emotional accompaniment) unpleasant to the individual has been forcibly pressed out of consciousness, but the activity of which has not been neutralised.

In the ordinary course of things the memories of painful experiences generally fade with time or are worked off by suitable reactions. In cases where the experience is not neutralised by any suitable reaction there is the possibility, according to Freud, of such experiences not being duly associated with the conscious life of the individual. Being unpleasant they are repressed and relegated to the domain of the subconscious mind. But though submerged they are not destroyed, and in certain circumstances are apt to be active and to come into conflict with ideas of the conscious mind, when the individual will be more or less influenced by them.

No doubt everyone is unconsciously influenced by buried complexes, which may be expressed in another manner by stating that our motives are often different to what we would like them to be, and what we generally persuade ourselves into believing they are; and when this influence is unduly strong the result may shew itself in some abnormal manner, which we term a neurosis. As already said, the hypothesis was evolved in relation to cases of hysteria, in which disease the practice of psycho-analysis appears frequently to have a beneficial effect, but it must be remembered that though the practice of this method may be useful in treatment, it does not necessarily follow that the explanation of its action is more than hypothetical; and in this respect one has only to be reminded that there are other views regarding the nature of hysteria

which also merit attention, more especially those of Janet and Babinski, though there is not, apparently, so much of a gap between those of Janet and Freud as might at first sight appear.

What is said here then refers only to the therapeutic aspect of the question, and from the fact that its object is to expose the offending complex and bring it into line with those making up the conscious life, it has been called the "cathartic method."

The method by which psycho-analysis is carried out is that known as "free association," which consists in persuading the patient to give out his thoughts just as they come into his mind, without thinking of what importance or bearing on the subject they may or may not seem to have.

Point after point is gradually picked out by the physician until the analysis is at last complete. The difficulty in bringing the offending memories to light seems to be due to the fact that the patient is unconsciously repressing them, and it is only by patience and perseverance that they can be obtained.

Additional methods of arriving at this end are those of the "word associations" of Jung, and by the analyses of dreams.

Its main drawback in complicated cases is the time it takes to follow out the various ramifications of the patient's thoughts, and the patience and perseverance that are required in order to overcome the "resistance" which the patient unconsciously raises against the revival of the complex, which has been originally suppressed because of its unpleasantness. The principle, however, is a far-reaching one, and in the early stages of psychosis it may be usefully employed in many cases with much more ease than in the complicated conditions that so often exist in cases of long-standing hysteria. For instance, a little while ago a patient came to see me on account of ideas of persecution and auditory hallucinations which he had recently acquired, and the onset of which had, apparently, been precipitated by being "run down" and by having suffered from a somewhat severe illness. He was quite willing at the time I saw him to recognize that his ideas were erroneous and that the voices he heard were imaginary, though at times his actions were considerably affected by their pressure. This ability to recognize the falsity of his

thoughts made argument possible, and after several interviews one was able to analyse out the steps by which the ideas were built up, and finally to reach the apparent root ideas from which they seemed to have started. Combined with the use of the principle of "analysis" one practised also that of "persuasion," since one pointed out to him, as far as possible, where he had gone wrong and what the false steps were that he had taken. Added to these there was a certain amount of "suggestion" used in the method in which the facts were laid out, and in the endeavour to restore confidence. The final result was good, complete recovery took place, and the patient has returned to strenuous work, and up to the present is keeping quite well.

An instance of this kind serves as an example of the wisdom of not confining oneself strictly to one method of treatment, as the enthusiastic followers of this or that method are sometimes apt to do. The basis of all methods should be used when required, and adapted to meet every particular case. An interesting example of the results of "Persuasion" and "Suggestion" is to be found in a case of monoplegia in a young woman who had not used her leg for about fourteen years, and who was anæsthetic up to the level of the knee. The reflexes were normal, the nutrition was good, and the case presented no special difficulties in diagnosis, though for some reason it had at various times been considered to be of an organic nature. Isolation, massage, and electrical treatment, together with "persuasion," quickly produced a good effect, and in a few weeks the limb had completely recovered its functions, and has remained well since.

In this instance, which was one of typical hysteria of many years duration, the cure was effected quite simply, and without any recourse to the more elaborate methods of psycho-analysis. The mental condition of the patient in this instance was particularly serene, and this fact probably largely accounted for the rapidity of the recovery, and it is a good instance of the successful applicability of methods to a particular case.

It is not sufficient to cease all treatment as soon as the main symptoms of a psycho-neurosis disappear. It is necessary further to try to prevent the symptom returning, and to do this the mental condition of the patient must be

increased in stability. Methods of living must be regulated, excessive emotions checked, and as far as possible ideas must find their natural outlet in action.

All treatment should be systematised, so that the patient may first of all be relieved of the psychoneurosis, and then trained up by means of suitable mental and physical exercises to a condition of nerve stability, in order to ensure as far as possible against relapse, and to enable a rational perspective of the ordinary affairs of life to be maintained.

TWO CASES OF CHORIO-EPITHELIOMA.

By

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DURING the last year I have had under my care in "Bird" Ward two cases of that rare and extremely interesting variety of malignant disease known as chorio-epithelioma, and so far as I can ascertain from the records they are the only two cases of this kind which have ever been admitted into The Middlesex Hospital. The history of each case is very instructive.

CASE 1.

A. B., age 24, single.

This patient was admitted with a history of serious bleeding which, from the history, was attributed to the partial separation of an ovum some twelve weeks old. The practitioner who had been called in had seen the patient twice before she was admitted, and on the second occasion noted that the uterus had increased in size from that of a three months' pregnancy to one of nearly five months, but was inclined to attribute this discrepancy between his two observations, made at an interval of a few hours, to an error on his part on the first occasion.

The patient on admission gave a history of one month's amenorrhœa, followed by a slight loss every day for the last two months. Her breasts contained a mucoid secretion, her uterus was enlarged to a size corresponding to a five months' pregnancy, and on the anterior wall of her vagina was a hard, dark, tender swelling about the size of a shelled filbert, and which at the time was diagnosed as a thrombosed varicose vein. For the next few days there was a slight hæmorrhage from the uterus, and then a profuse loss from the region of the vaginal tumour, necessitating its immediate removal. With the idea that the case might be one of chorio-epithelioma and the growth a metastatic deposit, the piece removed was sent to the Clinical Laboratory for a report as to its nature.

The condition of the patient at the time of this operation was so bad that she had to be infused with saline solution, and I did not think it then prudent to explore the uterus. Some days later, but before the report on the nature of the tumour was delivered, a further serious hæmorrhage took place, this time from the uterus. I therefore dilated the cervix and removed a vesicular mole with a large amount of blood clot.

For the next three weeks the patient suffered from repeated attacks of fever, the temperature at one time reaching 105.6° F., and her health was so obviously depreciating that I decided, on the assumption that the case was one of chorio-epitheliomatous vesicular mole, to remove her uterus. This I did. The uterus contained an abscess in the right cornua, but no evidence of malignant disease was discovered. The nodule removed from the vagina, however, was found to consist of tissue typically chorio-epitheliomatous.

The patient remains perfectly well, ten months later.

CASE 2.

C. D., age 43, married.

The patient had had two children, the last eight months ago, since when she had been losing a little every day.

Three weeks before admission the patient was curetted, and the tissue removed submitted to a microscopical examination, with a resulting diagnosis of sarcoma of the uterus. She was accordingly sent into "Bird" Ward with the view of having her uterus removed.

Her temperature on admission was 101° F., her pulse 120, and the uterus was enlarged. Her lungs, as far as could be ascertained, were healthy.

The uterus on removal was found much enlarged, and extending into its cavity was a semi-pedunculated mass, readily friable, offensive in odour, and of a dark purplish colour. Microscopical sections shewed the tumour to be a chorio-epithelioma, composed of cells of the Langhan's layer type with large hæmorrhagic areas interspersed. The patient's progress was unsatisfactory, her temperature remained high, and at the end of twenty-four days she died suddenly.

At the post-mortem examination a large sub-peritoneal

abscess was found, and in each lung there were secondary deposits.

Etiology.

The average age of patients the subject of this disease is 33 years.

A large proportion of the reported cases have followed premature expulsion of the ovum, due to vesicular degeneration of the chorion, denoting that this condition is closely related to chorio-epithelioma.

Nature of the Tumour.

As is well known, the fertilized ovum burrows its way into the endometrium by means of its epiblastic or outer layers of cells, which are collectively known as the trophoblast, and which are specialized for nourishing the ovum in its early stages before the formation of the villi.

The trophoblast, in destroying the maternal tissues with which it comes in contact, excites a reactionary process therein with a consequent hypertrophy and the formation of a decidua, and in time, if the pregnancy is normal, a balance is struck between the foetal and maternal elements, and the further destruction of the latter is arrested coincidently with the appearance of the villi and the formation of the placenta, which now takes on the nourishment of the ovum.

The trophoblast consists externally of large multinucleated masses of protoplasm known as the syncetium, and internal to this a layer of well-defined polyhedral cells with vesicular nuclei, known as Langan's layer.

Under certain circumstances, the cause of which is unknown, this equilibrium between the foetal and maternal tissues is disturbed, and there results certain diseased conditions, ranging from the comparatively simple to the superlatively malignant.

These conditions are divisible into three groups:—

1. A simple vesicular mole, in which the stroma of the villi is in part degenerated and the trophoblastic elements shew marked proliferation, whilst the maternal tissue is invaded more than normal.
2. A malignant vesicular mole, in which the changes just mentioned are more marked, and the maternal

tissues are invaded by the over-active trophoblast cells, the growth at times perforating the uterus and forming occasionally secondary deposits, resembling in structure either the whole diseased villus or its trophoblast alone.

3. The intensely malignant chorio-epithelioma, which consists entirely of cells of trophoblastic origin associated with large extravasations of maternal blood.

The first of the two cases that I now report is of exceptional interest, because it is one of a group in which the primary growth was apparently situated in the vagina. Such an event, which may be associated either with a vesicular mole or an apparently normal uterine pregnancy, is accounted for by the deportation of trophoblast cells from the site of the grafting of the ovum to the vaginal wall. Why in such cases the trophoblast is able to form a malignant growth in the vaginal wall and not in the uterine wall is unknown to us, but its probable explanation is that the decidual reaction in the latter situation, to which I have already referred, is powerful enough to inhibit there the invasive properties of the embryonic cells.

In my case it is of course possible that a definite primary growth was present in the uterus, but that I removed it when evacuating the mole. It may have been located in the position in which the abscess was found in the uterine wall after the removal of the uterus. In any event, this case must be classed in the group of malignant vesicular moles.

My second case belongs to the much commoner group in which a frank chorio-epithelioma develops in the placental site shortly after the termination of a pregnancy.

Symptoms and Signs.

The leading symptom is hæmorrhage, frequently of a very severe type; in addition there is marked anæmia, wasting, and often fever, with occasional rigors.

Pain is not a marked symptom. Cough and hæmoptysis may occur early in the disease, and are due to secondary deposits in the lungs. As a rule the disease declares itself some little while after the termination of pregnancy, generally

within a month, but in many cases the symptoms date from the termination of the pregnancy, or even before that, whilst rarely they may appear some months or even a year after.

The uterus enlarges rapidly.

Diagnosis.

The diagnosis will rest on a microscopical examination of any tissue removed from the uterus, together with a consideration of the observed signs and symptoms, but as in the early stages these markedly resemble cases of retained placenta, with or without sepsis and subinvolution, the cases are apt to be overlooked at first, especially when an internal exploration under an anæsthetic discloses what is thought to be a piece of retained placenta, and which is thrown away without any microscopical examination being made of it. In such cases, however, the patient does not improve under treatment, but gets so rapidly worse that suspicions are eventually aroused as to its true nature.

Continued bleeding after the removal of a vesicular mole is also extremely suspicious.

Prognosis.

The prognosis is bad, most of the patients dying within a few months even after removal of the uterus, though a certain number have recovered after this operation. A few cases have recovered without any operative treatment or after simple curetting, and in these it is supposed that the extravasated blood must have destroyed the cells of the neoplasm.

It has been noted that cases occurring in association with vesicular moles are not so fatal as those associated with a normal pregnancy.

Cases of the rare and interesting variety to which my first belongs, namely, those in which the growth is apparently primary in the vagina, a vesicular mole occupying the uterus, are stated to have a relatively good prognosis by those who have investigated the histories of collected examples.

Treatment.

The uterus should be removed as soon as the condition is diagnosed, together with any secondary deposits in the vagina that may be present.

ON TWO FATAL CASES IN WHICH ACUTE APPENDICITIS LIGHTED UP OLD TUBERCULOUS LESIONS.

By W. SAMPSON HANDLEY, M.S., F.R.C.S.

Now that cases of acute appendicitis usually reach the surgeon in an early stage, a fatal result from the disease has become a comparatively rare event. But in the two cases now to be described, fatal complications ensued upon an apparently successful operation in consequence of the recrudescence of old tuberculous lesions. In both cases the appendicitis appeared to be of the ordinary acute septic type, dependent upon pyogenic organisms and not upon the tubercle bacillus.

CASE 1.

Pelvic appendicitis with secondary inflammatory obstruction of the pelvic ileum.—Appendectomy and drainage.—Lateral anastomosis and enterostomy.—Recovery from the abdominal symptoms, but subsequently death from acute caseating tuberculosis of the whole of both lungs.

Wm. B., a man aged 28 years, was admitted to the Hospital on 17 March 1912 for abdominal pain. He had measles when a child; influenza three years ago; scarlet fever fourteen months ago, complicated with pleurisy. There was no history of phthisis in the family. He had had pain in the right iliac fossa with occasional vomiting for three days.

State on admission, 6 p.m.—He is a well-nourished, muscular man, complaining of pain in his abdomen. His temperature is 99° F., and his pulse 96. On inspection the abdomen is distended, especially just above the pubes. No peristalsis of the intestines can be seen. On palpation there is marked rigidity over the whole of the lower part of the abdomen. No lump can be felt in the right iliac fossa. On rectal examination there is great tenderness, and a fulness can be felt on the right side. Nothing abnormal could be heard on auscultation of the chest.

The patient was anæsthetized and an incision made in the middle line from one inch below the umbilicus to the pubes. Pus exuded from the peritoneal cavity and was swabbed out. The pelvic peritoneum and pelvic ileum were found to be inflamed, and the intestines higher up were distended. The appendix, gangrenous and perforated, was ligatured and removed. A lateral anastomosis was made between the upper non-inflamed, distended part of the ileum and the ascending colon near its junction with the cæcum. A soft rubber catheter, No. 10, was stitched by means of a circular suture into the lower part of the jejunum, and brought out through the incision in the abdominal wall. A large drainage tube was put in the pelvis, and the abdominal wound was closed by means of through-and-through sutures.

At 11 P.M. the patient was greatly distended; $\frac{1}{25}$ of a grain of salicylate of eserine was injected hypodermically and flatus was passed almost immediately through the catheter; the patient was ordered continuous saline and passed flatus freely by the catheter.

On 18 and 19 March the temperature remained normal: a good deal of pus was discharged by the drainage tube.

On 20 March the temperature rose to 102.2° F., and respirations to 30 per minute, and the patient was slightly cyanosed. On examination of the chest by percussion there was absolute dulness over the left base; at the right base slight dulness. No increased vocal resonance or fremitus on either side. At the left base there was tubular breathing on expiration only. At the right base tubular breathing could be heard over a small area, both on inspiration and expiration.

On 21 March the condition of the patient was the same. He was examined by Sir James Kingston Fowler, who confirmed the above signs and said he thought there was fluid at the left base and a patch of pneumonia at the right base, and suggested that the left pleura should be aspirated, and if fluid was found as much as possible should be aspirated, and if pus was found the operation for empyema should not be performed at present on account of the condition of the patient.

The left pleura was aspirated and $\bar{3}$ 2 of pus drawn off. The apex beat was not displaced.

The temperature and pulse remained the same until the

evening of 24 March, when the temperature fell to 99° F. and the respirations to 22. The catheter became loose and was removed and a fæcal fistula resulted. The stitches in the abdominal wound were cutting out and several sloughs formed. Hot fomentations were applied on the evening of 25 March; the temperature again rose to 102·6° F., but fell again to normal on the following morning. This intermittent pyrexia continued until five days before the death of the patient. Subsequently it remained high, being always above 100° F.

The drainage tube was removed on 30 March, and the lower wound healed completely. A small hole remained where the catheter was, and this never completely healed, a fæcal fistula remaining until the patient's death. Sir James Fowler examined the patient on 1 April and stated that no adventitious sounds were to be heard in the lungs. On 16 April Dr. Lakin examined the patient in Sir James Fowler's absence, and stated there was a small area of tubular breathing over the left base and suggested it should be explored; a needle was inserted with no result. On the following day the patient was examined by Dr. Lyster under the screen, but nothing abnormal could be detected. The patient gradually got weaker, and died on the morning of 20 April. The post-mortem examination revealed the abdominal cavity in a normal condition except for the small opening where the catheter had been. There was acute caseating tubercle of the whole of both lungs.

CASE 2.

Long-standing spinal caries.—Acute gangrenous appendicitis.—Appendectomy.—Recovery.—Three months later evacuation of a right-sided abdominal abscess, which proved to communicate with the cavity of a right psoas abscess.—Death from acute caseating tubercle of the lungs and septic infection of the psoas abscess.

Mr. Sampson Handley operated on a boy, æt. 18, who had been admitted to the Hospital with the following history: The only previous illness was chicken pox when two years of age. There was no history of tubercle in the family. Eighteen

months ago the patient was working in a hay loft in Canada, when he fell through a hole in the floor to a distance of 30 feet and landed on his back. He rested for a week and was then able to return to his work. Eight months after the accident he complained of a dull aching pain in the lower lumbar region, which was not so severe as to prevent him following his occupation, namely, that of a farm labourer. This pain continued until seven days before admission, when he attended the out-patient department of the Hospital and was given a plaster to be applied over the lumbar region, and the pain disappeared. Two days later he had severe pain round the neighbourhood of his umbilicus, which lasted for a few hours and then was felt in the right iliac fossa. He vomited all food after taking it, and had diarrhoea continuously until admission.

On admission he was slightly cyanosed, with an anxious, pinched expression; pulse 84; temperature 97° F. The extremities were cold, the tongue dry and covered with a thin layer of yellowish-grey fur. The abdomen moved on respiration; it was not rigid, but just internal to the right anterior superior iliac spine could be seen a fulness, and a swelling was felt about the size of a small apple, which did not fluctuate but was very tender on pressure.

On examination *per rectum* the right side was very tender. Hot fomentations were applied over the iliac fossa, and hot bottles put round the extremities. Five hours after admission the temperature had risen to 100·8° F. and the pulse to 100. Four hours afterwards the temperature was 102·6° F. and the pulse rate had fallen to 88. The blood count was 5,280,000 red, 13,000 white. An hour later the patient was taken to the operating theatre, and Mr. Handley opened the abdomen, using Battle's incision. Pus immediately escaped when the peritoneal cavity was opened. The appendix was found to be gangrenous and perforated near the tip; it was ligatured at its junction with the cæcum and removed; two drainage tubes were inserted and the abdominal wall sutured by means of through-and-through sutures; the patient was taken back to bed, continuous saline *per rectum* being given. A fortnight afterwards the tubes were removed and the patient made an uninterrupted recovery and was sent to Clacton Convalescent

Home, the wound having completely healed. At this time nothing abnormal was detected in the region of the dorsal or lumbar spine.

Three months subsequently the patient was readmitted into The Middlesex Hospital, under Dr. Pasteur, with abdominal pain. On the following morning he was seen by Dr. Lakin, who sent for Mr. Handley and asked him to see the case as the patient had previously been under Mr. Handley. On examination a red, painful, tender swelling was found in the region of the old scar; he was at once taken to the operating theatre. An incision 3 inches long was made just behind the scar, and a large quantity of foul-smelling pus immediately escaped; on exploration with the finger a large cavity could be felt behind the peritoneum, extending as far as the finger could reach. A counter-opening was made just behind and two large drainage tubes put in. The bacteriological report was a pure culture of β coli.

Owing to the temperature rising at night and falling in the morning, and as nothing surgical could be found to account for the phenomenon, Dr. Pasteur was asked to see the patient, but he could not detect any adventitious sounds in the lungs. Six weeks afterwards an exploration was made under CHCl_3 by Mr. Handley; an abscess cavity found to be present in the right psoas muscle, a sequestrum of bone was removed and a lumbar drain inserted. A fortnight later the patient was again seen by Dr. Pasteur, who said there was evidence of breaking down of both lower lobes. Two days subsequently the patient complained of frequent cramp-like pain in the limbs; there was no discharge from the lumbar wound and the tube was removed. Later the man became delirious at night, his general condition became worse, and he died in a few weeks.

The post-mortem examination made by Dr. MacCormac revealed the thymus considerably enlarged; all the mediastinal glands were also enlarged but were not tuberculous. Both lungs, chiefly towards their bases, were the seat of numerous small tuberculous deposits, which were caseating. The pleura was adherent on both sides (recent adhesions).

The mesenteric glands were enlarged, there was considerable matting and many adhesions of the intestines in the

neighbourhood of the appendix operation, otherwise the intestines were normal. A psoas abscess was present on each side. The bodies of the twelfth dorsal and first lumbar vertebræ were carious.

* * * * *

It appears to be important to recognize the gravity of previous tuberculosis as an element in the prognosis of acute appendicitis. If any old tuberculous lesion is known to exist it is probably wise to follow up the operation by a course of mercurial inunction so as to minimize the risk of an acute tuberculous process supervening. Moreover, after recovery from the operation the patient should be placed in the best possible hygienic conditions. In the case of an Eton boy with sub-acute appendicitis, upon whom I recently operated, many large caseating glands were found in the mesentery and behind the peritoneum. The appendix itself was not tuberculous, but the largest glands present were those situated at the ileo-colic junction which receive the lymph drainage of the appendix. These glands were palpable through the abdominal wall as a definite resistance in the right iliac fossa. From their size, as compared with that of the other glands, it appeared as if the appendix was irritating them, and had it not been removed it appears quite likely that they would have broken down and suppurated, for in tuberculous glands of the neck it frequently happens that secondary septic infection from carious teeth determines suppuration. None of the enlarged glands were removed, but operation was followed by a course of mercurial inunction. In view of the patient's deficiency in the matter of weight for height I strongly urged that he should be kept away from school for a term, and that he should be sent to Margate, and should lead an out-door life. This boy's weight has gone up, and his health now appears to be quite re-established. In view of the history of the two cases I have related I am convinced that the precautions adopted were wise and necessary.

In conclusion, I desire to express my thanks to Mr. J. St. A. Titmas, lately House-surgeon at The Middlesex Hospital, and now Resident Medical Officer at the Putney Hospital, both for the care he bestowed on the cases and for the careful notes which form the basis of this short Paper.

A CASE OF RUPTURE OF THE VAGINA DURING COITUS.

By

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RUPTURE of the vagina of a woman during coitus is an extremely rare occurrence, and it is desirable therefore to place the following case on record.

A woman, aged 40, was admitted to "Bird" Ward in October last with symptoms of peritonitis and a bloody vaginal discharge. On examining her I found a hole which would have admitted a man's thumb in the posterior vaginal vault, leading direct into the peritoneal cavity. The edges of the hole were remarkably sharp and thin, and by passing a finger through it coils of intestine and the lower edge of the omentum could be felt.

The patient was a person of attenuated tissue generally, the vaginal walls in particular appearing unusually thin and fragile. The canal was not, however, shorter than normal. She had had several children, and was somewhat alcoholic in appearance.

I at first suspected that the injury had occurred in consequence of an attempt to pass a foreign body into the uterus with the object of criminal abortion, although the patient presented no signs of pregnancy.

On questioning her closely, however, she, after some evasion, stated that the night before, being in liquor, she permitted coitus in the upright posture. The act was followed by instant pain, so severe that she at once disengaged herself. Considerable bleeding followed. She returned home in great agony, and remained in that condition until her admission to the hospital. She was at once taken to the operating theatre, where I opened her abdomen and found a clean tear through the anterior wall of Douglas' pouch about an inch from its

floor. In the pelvis was a considerable quantity of blood and blood clot. Early generalized peritonitis was present.

I removed the blood from the pelvis, sewed up the rent with interrupted sutures, inserted a large-sized drain tube through the lower end of the abdominal wound, and closed the rest of it by the usual three-layer method. She made a rapid recovery, and left the hospital on the twenty-fourth day.

On looking into the literature of the subject I find that ruptures of the vagina during coitus may be divided into two groups.

In the first group the injury is in the nature of a *laceration*, and affects chiefly the introit and the lower end of the canal.

Such injuries in women are usually the result of rape. Muller,¹ for instance, records two instances, one in a girl of 24 years and one in a woman aged 72. In both the lacerations affected the posterior vaginal wall without perforation into the peritoneum, and were the result of criminal assaults.

Ruptures of this type do not commonly involve the peritoneum, probably because the male organ does not proceed far enough up the canal. The lower end of the vagina is much narrower than the upper end, and hence is the part most likely to give way when acutely stretched by the insertion of a disproportionate body.

The tear is usually situated either posteriorly or laterally, and opens up the para-vaginal cellular tissue. Exceptionally, it may extend until it reaches the peritoneum, through which it may penetrate into the peritoneal cavity.

Ruptures of this variety are not uncommonly seen in mares after having been covered by a stallion, but, as in women, they rarely involve the peritoneum, though they may open the rectum. It has been stated to me that similar injuries are sometimes met with in bitches, but I cannot find any such cases recorded in veterinary literature, and Mr. Hobday, of the Veterinary College, tells me he has never seen one.

In the second group, to which the case I now record belongs, the injury is in the nature of a *perforation*, and is evidently produced not by stretching but by the direct impact of the penis.

In the museum of St. George's Hospital a very interesting specimen of this type of rupture will be found. It is labelled,

Specimen series 14, 3 A. Permanent No. 2036. It consists of the uterus, vagina, and appendages, removed in one piece, together with a portion of the bladder.

The following is the description of it as taken from the museum catalogue:—

“*Laceration of Vagina produced by Coitus.*—There is a rent passing along the upper two inches of the vagina and dividing the mucous membrane and the underlying fibres of the muscular coat. The rent deepens as it ascends, and on a level with the os uteri has broken through into the peritoneal cavity. The hole in the peritoneum is not quite large enough to admit the little finger.

The preparation was taken from the body of a woman 70 years of age, who had recently been married to a lifeguardsman. The injury was done in the act of intercourse. It is probable that death followed within a short time, for there is no trace of lymph in the neighbourhood, and the edges of the wound are sharp and distinct, and quite free from any reparative or morbid action.”

Dr. Trevor, the curator of the museum, called my attention to another case of possible rupture during coitus which is figured in Hofmann’s “Atlas of Legal Medicine,” Fig. 73. The photograph shews a slit-like tear 4 cm. in length in the right posterior vaginal vault. The upper end of the rent perforates the peritoneum.

It was removed from a girl, aged 19, who died of peritonitis, six days after the receipt of the injury, which was produced by a coachman, who is stated to have first passed his finger into the vagina and subsequently to have had intercourse with her. In this case, however, it was held that the injury was probably done by the man’s finger, because post-mortem a small laceration bearing the impress of a finger nail was found on the left side of the vagina, in addition to the rent on the right side. That the mark of the finger nail should be distinctly visible six days after the injury is, however, very unlikely, and my own opinion is that the major wound at all events was the result of intercourse.

It must, however, be remembered that in some women the vaginal walls are very frail. I myself know of one case in which perforation of the posterior vaginal vault down to, but

not involving, the peritoneum occurred in the course of a vaginal examination carried out with no undue force.

A woman has ruptured her own vagina, as in a case recorded by Fehling,² in which sudden prolapse occurred whilst carrying a pail of water, and the injury was inflicted by self-endeavours to replace the protruded mass. In this case the intestine escaped through the rent, and the patient died.

Finally, spontaneous rupture has been recorded by Andrew McGregor.³ In this case a woman who had borne ten children suddenly extroverted and ruptured her vagina in the effort of carrying a quantity of coal. She was operated on and recovered.

REFERENCES.

¹ "Gyn. Bundschan," 1908, Ht. 12.

² "Archiv. fur Gyn.," Berlin, 1873-4, vol. vi., p. 103.

³ "British Journal of Obst. and Gyn.," vol. ii., p. 257.

HOURS OF HOSPITAL VISITS, ETC.

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		Dr. ARTHUR F. VOELCKER ...	...	...	...	...	1.30	...	...	1.30	...
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		Sir J. BLAND-SUTTON ...	...	...	...	...	1.30	...	...	1.30	...
		Mr. J. MURRAY ...	...	...	...	1.30	...	...	1.30	...	...
		Mr. T. H. KELLOCK ...	...	...	...	1.30	...	...	1.30	...	...
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Mr. COMYNS BERKELEY ...						...	1.30	...	1.30	...	...
Ophthalmology : Mr. LANG ...						...	10	...	10	...	...
Operations ...						1.30	1.30	1.30	1.30	1.30	1.30
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		Dr. R. A. YOUNG ...	...	...	...	...	1.30	...	...	1.30	...
		Dr. C. E. LAKIN ...	...	...	...	...	...	1.30	...	...	1.30
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Diseases of the Nervous System :											
Dr. CAMPBELL THOMSON...						...	...	...	1.30	...	10
Diseases of Women : Mr. VICTOR BONNEY ...						9.45	...	9.45	...	...	...
Diseases of Children : Dr. MACCORMAC ...						...	...	9	...	...	9
Diseases of the Eye :						Mr. W. LANG ...	...	9	...	9	...
						Mr. ARNOLD LAWSON ...	...	...	9	...	...
Diseases of the Ear and Throat :											
Mr. SOMERVILLE HASTINGS ...						...	9	...	...	9	...
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